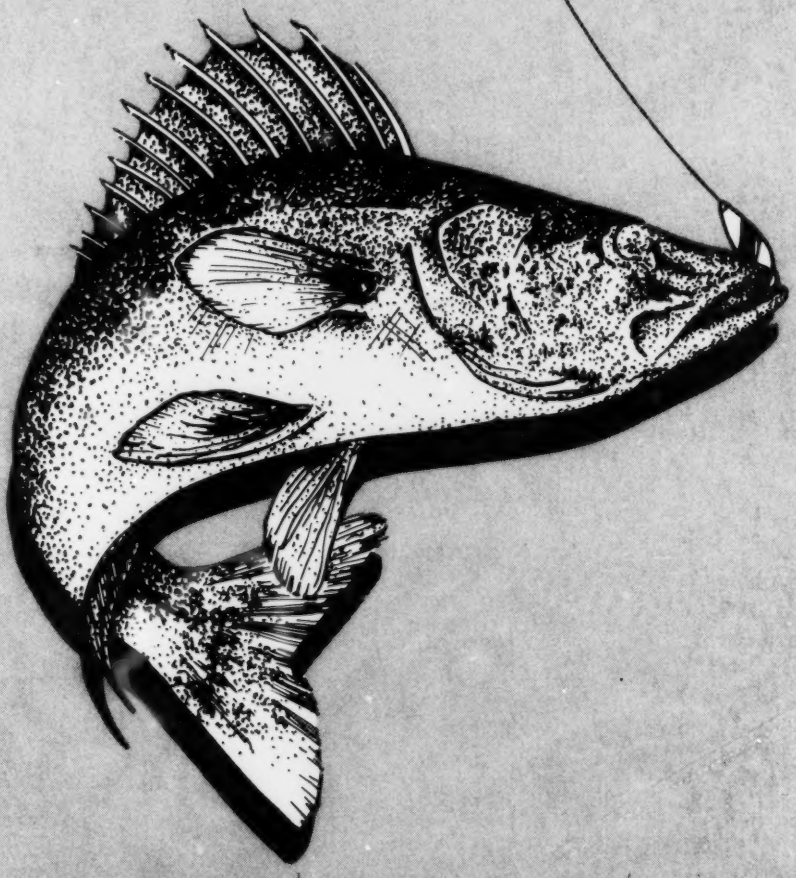
KENORA DISTRICT FISHERIES MANAGEMENT PLAN

1987-2000



Ontario

Ministry of
Natural
Resources

Kenora District
Fisheries Management Plan

1987–2000

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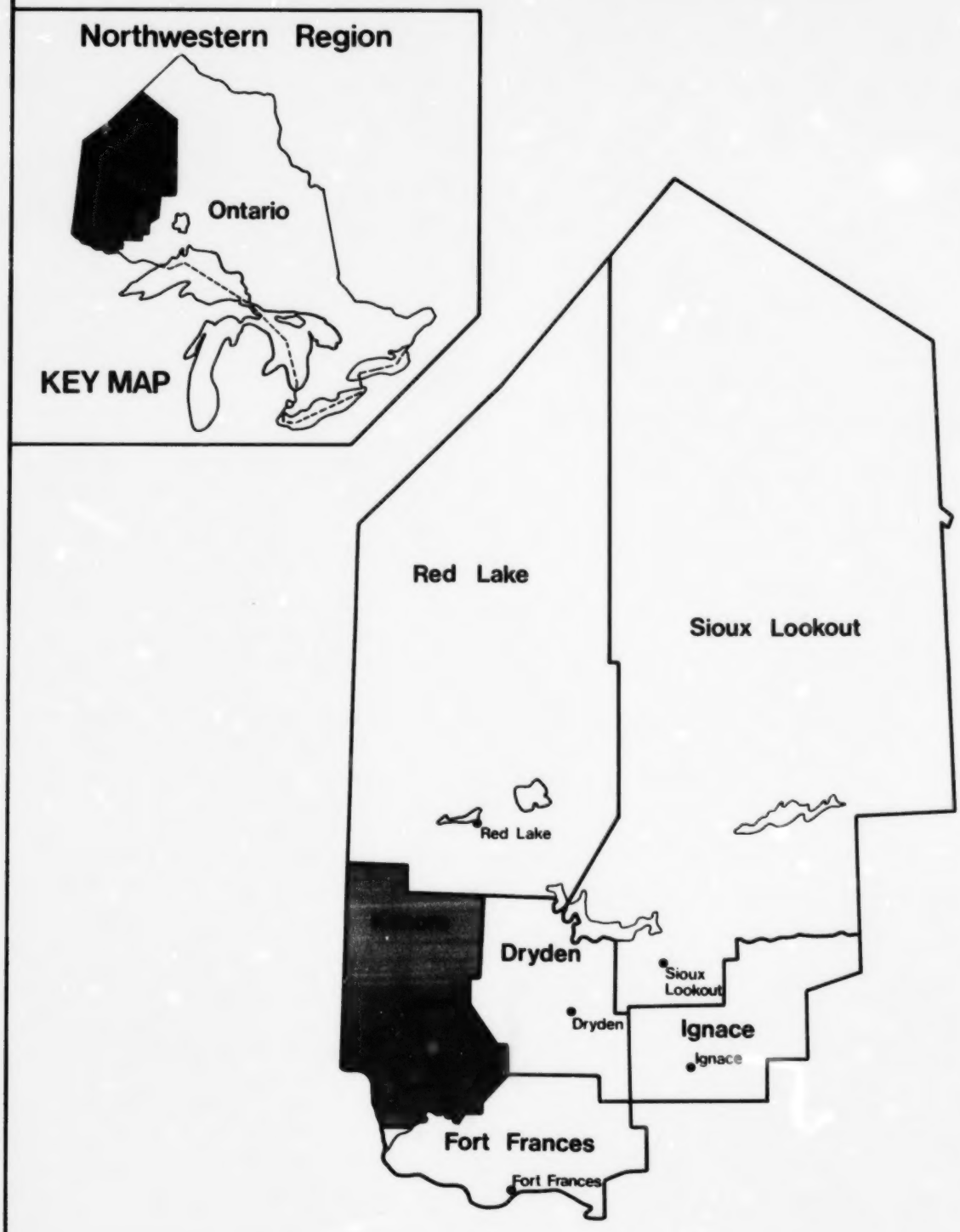
District and Regional Setting



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PREFACE

The purpose of this plan is to identify the fisheries management direction being taken within the Kenora Administrative District to the year 2000.

Fisheries management has to be good for the fisheries resources and acceptable to the resource users. To achieve these goals, this plan was prepared in the sequence of events described below:

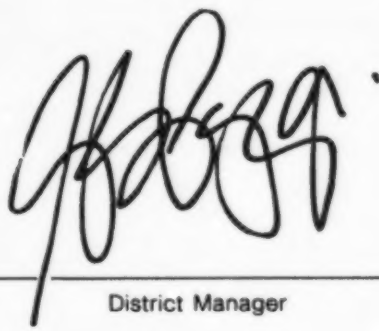
1) during the summer of 1986, existing data was analysed, summarized, and prepared in a document entitled Background Information and Optional Management Strategies;

2) this document and associated information was disseminated to the public and extensive consultation was done during the autumn of 1986 to review the information and assess management strategies;

3) a draft plan was prepared and presented to the public in the fall of 1987. Management strategies taken were chosen based on a re-evaluation of the data and comments received from public consultation efforts; and

4) comments from the public during the draft plan phase were assessed and used to prepare this document, which is the **final plan**.

It gives us pleasure to approve this plan as the document which will guide fisheries management in the Kenora District to the year 2000. A great deal of time and effort has gone into its production. It is a plan with which we can all be proud.



District Manager

Regional Director

1. INTRODUCTION

1.1 PURPOSE

The purpose of this fisheries management plan, hereafter referred to only as plan, is to outline long-term fisheries management direction (1987–2000) and identify specific short-term (5 year) management activities to be carried out within the Kenora Administrative District (Figure 1).

The Kenora District fisheries management plan pertains to all waters in the District proper with the following exceptions:

1) lakes wholly within Ontario but straddle Kenora and another administrative boundary are generally managed by the district with more than 50% of the surface area;

2) the Ontario-Manitoba Boundary Waters Agreement identifies who is the lead agency and provides a framework for development on lakes bordering these two provinces; and

3) The Ontario-Minnesota Fisheries Technical Committee was established to review and assess fish stock status and management actions on boundary waters of the two jurisdictions (Lake of the Woods, Rainy River, Rainy Lake).

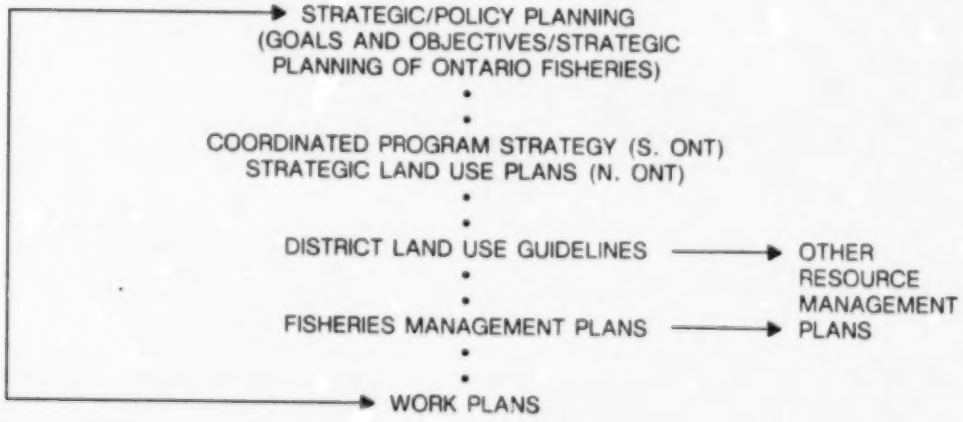
Appendix 1 lists all lakes straddling administrative boundaries and gives the jurisdiction responsible for its management.

1.2 PLANNING PROCESS

Fisheries management planning in Kenora District is done according to the resource planning and management system of the Ontario Ministry of Natural Resources (MNR) (Figure 2). Broad program direction for optimization of resource use, including fisheries, is provided by the Northwestern Ontario Strategic Land Use Plan (NWSLUP). The Kenora District Land Use Guidelines (DLUG) identifies land and water areas in the district where particular activities are appropriate, while specific resource management plans, like the fisheries plan, describe how DLUG targets and objectives will be achieved.

FIGURE 2

DISTRICT FISHERIES MANAGEMENT PLANNING AND THE MINISTRY RESOURCE PLANNING SYSTEM


STRATEGIC/POLICY PLANNING
(GOALS AND OBJECTIVES/STRATEGIC PLANNING OF ONTARIO FISHERIES)
COORDINATED PROGRAM STRATEGY (S. ONT)
STRATEGIC LAND USE PLANS (N. ONT)
DISTRICT LAND USE GUIDELINES
OTHER RESOURCE MANAGEMENT PLANS
FISHERIES MANAGEMENT PLANS
WORK PLANS

This fisheries management plan details fisheries management strategies intended to be used to the year 2000. The implementation of specific management tactics to achieve these strategies is generally described in a management implementation schedule presented near the end of this document. The schedule indicates whether or not the proposed management action will be implemented in the first five years after plan approval or later. New information can result in a Plan Amendment, whereby a management strategy may or may not be implemented according to the original implementation schedule. A Plan Amendment can be recommended at any time. This differs from the formal review, which takes place at five year intervals. Annual fisheries work plans will be formulated in accordance with the implementation schedule.

The development of a fisheries management plan for the Kenora District represents the final product of a six stage systematic planning process as described in Figure 3. This document represents Stage 6.

FIGURE 3

SYSTEMATIC PLANNING APPROACH

Stage 1: Preparation of Terms of Reference

Stage 2: Identification of Objectives and Targets

Stage 3: Collection and Analysis of Background Information and Identification of Issues and Problems

Stage 4: Identification of Optional Fisheries Management Strategies

Stage 5: Development of the Draft Management Plan

Stage 6: Development of the Final Management Plan

Documents prepared during the process include TERMS OF REFERENCE; DETAILED BACKGROUND INFORMATION; BACKGROUND INFORMATION AND OPTIONAL MANAGEMENT STRATEGIES: A SUMMARY; and KENORA DISTRICT FISHERIES MANAGEMENT PLAN, DRAFT PLAN. All of these documents are available for public review at the District Office.

1.3 EXISTING POLICY AND TECHNICAL DIRECTION

This plan adheres to current MNR policies. Specific policy direction was provided by the Kenora District Land Use Guidelines. Operational components of this plan will, where required, conform to the legislative requirements of the Environmental Assessment Act (R.S.O. 1975). This may necessitate changes to specific tactics contained in the plan.

Technical direction was provided by the booklet "District Fisheries Management Plans — Planning Manual (MNR 1986).

All management strategies and tactics satisfy the principles stated in the Strategic Plan for Ontario Fisheries (SPOF) and are accepted fisheries management principles and practices.

1.4 INTEGRATION WITH OTHER PROGRAMS

Integration of this plan and other district programs was achieved partly through a planning team approach. Planning team members represented land management, forest management, operations, fish and wildlife management and the Ministry of Tourism and Recreation. The planning team was responsible for review and evaluation of the summary document and draft management plan to ensure fisheries management recommendations were consistent with the direction of other programs.

1.5 PUBLIC CONSULTATION

Open houses and public meetings with various interest groups were a major thrust used to attain input into this plan from the public. Use was also made of radio, television, newspapers and magazines to solicit input. Resource users (commercial fishermen, tourist camp operators, trappers, Indian groups, etc.) were contacted directly by mail or by meeting and informing them of the fisheries management planning process. Their input was requested at all stages of this process.

Open houses and public meetings presented a summary of background fisheries information and introduced optional management strategies and tactics. At the open houses and afterwards,

summary documents and questionnaires were available to allow the public to review and comment on the data and optional management strategies and tactics.

Upon completion of the draft plan, the public was again consulted. To ensure all area residents were aware of the plan and the planning process, a tabloid summarizing the draft plan and requesting public input was prepared and distributed in the mail to all resident mailing addresses in the Kenora District. Open houses, public meetings and other consultation methods as described above were repeated. Draft plans and a comment sheet were available to those who attended open houses, meetings and upon request. Anyone who had requested any of the previous documents was sent a draft plan and comment sheet.

A summary of public consultation efforts is provided in Appendix III.

All public comments resulting from all phases of public input were considered in the development of the plan. Comments were analyzed by identifying areas where:

1) there was strong public support or disagreement for particular strategies or tactics;

2) feelings were mixed over strategies and tactics;

3) no comments on a particular strategy or tactic were given; and

4) other problems, strategies or tactics which were identified.

All comments were then evaluated in terms of economic feasibility, pertinence to the subject, legal acceptability, social acceptability, consistency with fisheries management principles and policy, complexity, environmental impacts and administrative requirements.

2.0 DISTRICT FISHERIES PERSPECTIVE

2.1 PHYSIOGRAPHY

Kenora District lies within the Superior Structural Province of the Pre-Cambrian Shield. Differentiated and undifferentiated Archean granites are dominant although large expanses of Archean metavolcanics also exist. Some areas are characterized by migmatized metasedimentary rocks.

Glacial action is largely responsible for the surficial geology of the District and the glacial deposits in evidence are related to the Wisconsin advance which ended about 9,000 years ago. The Wisconsin was the last of a series of glacial advances and retreats which resulted in much of the area being scoured to bedrock. Besides exposed bedrock, repeated glaciation left the area with a discontinuous mantle of sandy till containing large amounts of boulders, stones and gravel but very little clay. Many of the rugged, rocky hills had most of their unconsolidated materials removed by wave action of glacial Lake Agassiz.

Kenora District is part of the Nelson River Drainage System. On the basis of drainage patterns, this system can be further sub-divided into the secondary watersheds of the Winnipeg River, English River, and Lake Winnipeg tributaries.

Fish productivity is influenced mainly by climate, geology of the watershed and morphology of the lake basin.

Climate regulates energy flow available for biological production. In Kenora District the growing season (a term which applies specifically to green plants but indirectly affects fish growth as well) is normally 164–175 days.

Lake nutrient levels reflect bedrock geology and soluble substrate of the watershed. In Kenora District many lakes overlie volcanic/granitic areas of the Canadian Shield and thus have low to moderate nutrient levels. However, some deeper soil (clay and loam) areas exist, especially in the northeast and southeast corners of the District and watersheds affected by these two areas are somewhat more productive.

Lake morphology (basin depth and shape) modifies the effects of climate and geology. Lakes which are deep and regular in shape are usually less productive than shallow, irregularly shaped lakes.

Lake productivity in Kenora District is considered to be low to moderate. Generally, lakes are less productive in the northern compared to the southern parts of the District.

2.2 FISHERIES RESOURCES

Within Kenora District there are 1,719 lakes with a total surface area of 496,179 ha. Of this, 50%, or 248,150 ha, is Lake of the Woods (Figure 4). There are three major rivers in the District, namely the English, Wabigoon and Winnipeg Rivers. However, these large rivers are in reality a string of lakes with no clear boundaries as to where one lake ends and another begins. For accounting purposes, these rivers have been broken up into lakes.

The major sport and commercial fish species sought by anglers in Kenora District are yellow pickerel (walleye), northern pike, muskellunge, black crappie, smallmouth bass, largemouth bass, yellow perch, lake trout, lake whitefish, and lake sturgeon. On Lake of the Woods and the major river systems, sauger are also abundant but are little utilized.

The allowable yield of the major fish species in the District is 1,559,116 kg/yr (3,437,851 lbs). Lake of the Woods has an estimated allowable yield of 984,092 kg/yr (2,169,923 lbs) or 63% of the total District yield (Table 1). Allowable yields (how many fish can be killed by fishermen year after year without depleting stocks) for yellow pickerel, northern pike/muskellunge, whitefish, black crappie/smallmouth bass/largemouth bass and lake trout comprise 22%, 22%, 15%, 19% and 5% of the total yield respectively for inland lakes. For Lake of the Woods, the respective percentages are 28%, 21%, 4%, 16% and 1.5% of the total yield. Allowable yields of lake sturgeon, sauger and crappie are only available for Lake of the Woods, although they do exist in inland lakes. Table 1 lists all allowable yields by species in kilograms for Lake of the Woods and inland lakes in Kenora District.

In addition to the major sport and commercial fish species, other fish species are also harvested in substantial amounts. These include ling (burbot, lawyers), bullheads, cisco or tullibees, white sucker and redhorse sucker. There are no allowable yield estimates available for these species.

Waters capable of supporting baitfish harvests are scattered throughout the District. No estimate of productivity is available, although historical data indicates annual harvests of hundreds of thousands of dozens are attainable.

2.3 CURRENT AND PROJECTED RESOURCE USE

Key users of the fisheries resources in Kenora District are as follows (arranged in alphabetical order):

i) anglers — resident — residents of Ontario
— non-resident — residents of U.S.A.
— residents of Manitoba

ii) commercial fishermen (bait)

iii) commercial fishermen (food)

iv) Indian people

v) tourist operators

A summary of how these key groups use the fishery and the economic and social values associated with their use is outlined below. More detailed information is given in the previous fisheries planning document entitled "Background Information and Optional Management Strategies: A Summary".

2.3.1 Anglers

The major fish species sought by anglers in the district are: walleye, northern pike, lake trout, muskellunge, black crappie and smallmouth bass. Lake of the Woods receives 60% of the angling pressure in the District, or 300,875 angler-days (an angler-day is four hours of fishing). Inland lakes have 200,583 angler-days, for a total of 501,458 angler-days in Kenora District (current).

On Lake of the Woods, anglers fish virtually everywhere, with the greatest effort being in the eastern half where access is easiest. On inland lakes, angler effort has been greatest on water accessed by road corridors south of the English — Wabigoon river system.

In 1980, 13% of the anglers in Kenora District were residents of Ontario. Manitoba residents totaled 15.1% of the anglers. The largest group of anglers, however (approximately 65%), originated from the U.S.A. The remainder of anglers originated from other provinces or countries.

Table 1 lists the current harvest by user group of all fish by species in inland lakes and Lake of the Woods. Walleye are the most popular angled species, comprising 49% by weight of the total angling harvest from inland lakes and 65% by weight of the total angling harvest from Lake of the Woods.

The value of the sportfishery to the economic health of the district is large but exact figures are difficult to ascertain. The Ontario Ministry of Tourism and Recreation believed a minimum estimate, that considered only the direct benefits to fisheries related tourism facilities, was approximately $23 million per year (1985). Tackle shops, gasoline purchases and other amenities used by both resident and non-resident anglers were not considered.

In the absence of any significant management actions affecting anglers and assuming fish stocks did not collapse, total angler harvests from inland lakes would be expected to increase from the current 279,960 kg (617,312 lb) to 346,035 kg (763,007 lb) by the year 2000. Total angler harvest on Lake of the Woods would be expected to increase to 374,870 kg (826,588 lb) from the current 306,321 kg (675,438 lb) in the same time frame (Tables 1 and 2).

Increased harvests would result from increases in non-resident of Ontario anglers. Increased angler numbers are a reflection of population increases occurring in Winnipeg and the mid-west U.S.A, which are those areas where non-resident anglers in Kenora District have historically come from.

Current and projected harvests for Lake of the Woods exclude Shoal Lake, since the present negligible sportfishery there and a future fishery are very much dependent upon both natural factors and management directives. Projected harvests are given on Table 2.

2.3.2 Commercial Fishermen — Bait

There are currently (1985) 45 fishermen licenced to harvest baitfish in all of the available 75 baitfish harvest blocks in the Kenora District. Blocks are all of equal size although some blocks are divided into partial blocks, with each partial block licenced to a particular fisherman. In addition to licenced blocks, licenses to harvest concentrations of baitfish (primarily shiners) exist at Caribou Falls, Norman Dam and Shoal Lake. Ten of these bait fishermen are commercial tourist operators who have a licence to harvest baitfish from small areas within blocks in order to supply baitfish to their guests. One land owner has a permit to trap baitfish in public waters surrounded by private land.

Species harvested include emerald, spottail and golden shiners; fathead minnows, pearl dace, finescale dace and northern redbelly dace (collectively called "chubs"); white suckers and ciscos.

The current estimated harvest of baitfish in the Kenora District is 214,149 dozen. Based upon projected angler increases and assuming each angler will continue to use the same number of baitfish, projected baitfish harvests in the year 2000 will be 264,784 dozen. In 1985, the gross revenue from the baitfish industry in Kenora District was approximately $250,000.

Recently, the harvest and sale of leeches has achieved some prominence in the baitfish industry of Kenora District. At the present time, harvest and sale is not regulated or restricted in any manner.

TABLE 1

CURRENT HARVEST LEVELS BY USER GROUP
(KG/YR)

LAKE/BASIN	SPECIES	NAT. SUBS. (KG/YR)	SPORT HARVEST RES OF ONT.	SPORT HARVEST NRES OF ONT.	COMMERCIAL HARVEST	TOTAL HARVEST	ALLOWABLE YIELD	OVER EXPLOI
LAKE OF THE WOODS								
NORTH SECTOR								
	WALLEYE	3,084	9,636	17,182	11,909	41,811	31,089	YES
	NORTHERN PIKE	1,682	2,727	6,364	25,455	36,228	27,757	YES
	WHITEFISH	500	—	—	6,000	6,500	11,102	NO [1]
	LAKE TROUT	90	1,818	909	364	3,182	5,550	NO [1]
	BLACK BASS	840	910	4,090	—	5,840	18,900	NO
	SAUGER	364	864	1,409	90	2,727	5,550	NO
	CRAPPIE	160	136	318	1,000	1,614	1,886	NO
	YELLOW PERCH	340	114	455	—	909	5,550	NO
	UNACCOUNTED *	—	227	455	—	682	1,666	NO
	TOTAL	**7,060**	**16,432**	**31,182**	**44,818**	**99,493**	**109,050**	**NO**
CENTRAL SECTOR								
	WALLEYE	—	7,225	34,640	24,090	65,955	47,880	YES
	NORTHERN PIKE	—	1,377	6,577	30,455	38,409	34,200	YES
	WHITEFISH	—	—	—	5,136	5,136	5,136	NO [1]
	BLACK BASS	—	275	1,295	—	1,570	29,090	NO
	SAUGER	—	140	666	330	1,136	13,680	NO
	CRAPPIE	—	45	90	2,000	2,135	2,992	NO
	YELLOW PERCH	—	37	210	1,154	1,401	8,550	NO
	UNACCOUNTED *	—	40	46	—	86	2,136	NO
	TOTAL	**—**	**9,139**	**43,524**	**63,165**	**115,828**	**143,664**	**NO**
SOUTH SECTOR								
	WALLEYE	3,415	5,537	69,370	77,087	155,409	132,455	YES
	NORTHERN PIKE	1,872	845	10,440	97,570	110,727	94,590	YES
	WHITEFISH	100	—	—	900	1,000	1,000	NO [1]
	BLACK BASS	936	123	1,623	—	2,682	65,090	NO
	SAUGER	375	500	1,685	7,758	10,318	43,955	NO
	CRAPPIE	187	82	600	6,557	7,426	7,500	NO
	YELLOW PERCH	40	40	430	945	1,455	23,680	NO
	STURGEON	—	—	—	4,545	4,545	4,545	NO
	UNACCOUNTED *	200	200	1,045	300	1,745	5,135	NO
	TOTAL	**7,125**	**7,327**	**85,193**	**195,662**	**295,307**	**377,950**	**NO**

continued....

TABLE 1

CURRENT HARVEST LEVELS BY USER GROUP

LAKE/BASIN	SPECIES	NAT. SUBS. (KG/YR)	SPORT HARVEST RES OF ONT.	SPORT HARVEST NRES OF ONT.	COMMERCIAL HARVEST	TOTAL HARVEST	ALLOWABLE YIELD	OVER EXPLOIT.
LAKE OF THE WOODS WHITEFISH BAY								
	WALLEYE	1,364	1,827	13,173	—	16,364	11,600	YES
	NORTHERN PIKE	1,364	1,718	15,463	—	18,545	13,400	YES
	WHITEFISH	409	45	410	—	864	9,295	NO
	LAKE TROUT	227	614	4,759	—	5,600	9,295	NO
	BLACK BASS	659	345	3,110	—	4,114	9,875	NO
	SAUGER	45	18	164	—	227	590	NO
	CRAPPIE	45	23	205	—	273	909	NO
	YELLOW PERCH	45	14	123	—	182	1,455	NO
	UNACCOUNTED *	—	68	614	—	682	1,136	NO
	TOTAL	**4,158**	**4,672**	**38,021**	**—**	**46,851**	**57,555**	**NO**
SABASKONG BAY								
	WALLEYE	2,273	2,886	38,068	—	43,227	28,682	YES
	NORTHERN PIKE	1,136	1,723	22,868	—	25,727	22,409	YES
	BLACK BASS	227	89	1,177	—	1,493	12,545	NO
	SAUGER	273	86	1,164	—	1,523	7,182	NO
	CRAPPIE	114	36	509	—	659	4,455	NO
	YELLOW PERCH	227	45	614	—	886	4,455	NO
	UNACCOUNTED *	227	109	1,457	—	1,793	8,045	NO
	TOTAL	**4,477**	**4,974**	**65,857**	**—**	**75,308**	**87,773**	**NO**
TOTAL								
	WALLEYE	10,136	27,111	172,433	113,086	322,766	251,706	YES
	NORTHERN PIKE	6,054	8,390	61,712	153,480	229,636	192,356	YES
	WHITEFISH	1,009	45	410	12,036	13,500	26,533	NO
	LAKE TROUT	317	2,432	5,668	364	8,781	14,845	NO
	BLACK BASS	2,662	1,742	11,295	—	15,699	135,500	NO
	SAUGER	1,057	1,608	5,088	8,178	15,931	70,957	NO
	CRAPPIE	506	322	1,722	9,557	12,107	17,742	NO
	YELLOW PERCH	652	250	1,832	2,099	4,833	43,690	NO
	STURGEON	—	—	—	4,545	4,545	4,545	NO
	UNACCOUNTED *	427	644	3,617	300	4,988	18,118	NO
	TOTAL	**22,820**	**42,544**	**263,777**	**303,645**	**632,786**	**775,992**	**NO**

continued....

TABLE 1

CURRENT HARVEST LEVELS BY USER GROUP
(KG/YR)

LAKE/BASIN	SPECIES	NAT. SUBS. (KG/YR)	SPORT HARVEST RES OF ONT.	SPORT HARVEST NRES OF ONT.	COMMERCIAL HARVEST	TOTAL HARVEST	ALLOWABLE YIELD	OVER EXPLOIT
SHOAL LAKE							108,100 [2]	YES
INLAND LAKES								
	WALLEYE	54,398	12,454	125,923	15,985	208,760	151,710	YES
	NORTHERN PIKE	24,726	4,770	48,236	18,638	96,370	146,484	NO
	WHITEFISH	11,868	687 [3]	—	152,746	165,301	101,847	YES
	LAKE TROUT	2,967	5,464	55,244	471	64,146	36,556	YES
	BLACK BASS [4]	989	2,446	24,736	466	28,637	126,425	NO
	YELLOW PERCH	1,484	—	—	—	1,484	41,849	NO
	UNACCOUNTED *	2,473	—	—	—	2,473	70,153	NO
	TOTAL	**98,905**	**25,821**	**254,139**	**188,306**	**567,171**	**675,024**	**NO**
ALL DISTRICT LAKES								
	WALLEYE	64,534	39,565	298,356	129,071	531,526	436,517	YES
	NORTHERN PIKE	30,780	13,160	109,948	172,118	326,006	366,425	NO
	WHITEFISH	12,877	732	410	164,782	178,801	148,240	YES
	LAKE TROUT	3,284	7,896	60,912	835	72,927	51,400	YES
	BLACK BASS	3,651	4,188	36,031	466	44,336	280,680	NO
	YELLOW PERCH	2,136	250	1,832	2,099	6,317	91,039	NO
	OTHER **	4,463	2,574	10,427	22,580	40,044	184,815	NO
	TOTAL [5]	**121,725**	**68,365**	**517,916**	**491,951**	**1,199,957** [6]	**1,559,116** [7]	**NO**

[1] OVER-EXPLOITATION NOT INDICATED BY PRESENT HARVESTS BECAUSE PAST OVER-EXPLOITATION AND HABITAT DEGRADATION HAVE RESULTED IN THESE SPECIES BEING UNDERPRODUCING.

[2] NO HARVEST FIGURES ARE SHOWN FOR SHOAL LAKE. WALLEYE FISHERY HAS BEEN CLOSED SINCE MAY OF 1983, DUE TO COLLAPSE IN THE FISHERY. NORTHERN PIKE FISHERY IS ALSO POOR. LITTLE ACTIVITY EXISTS IN THIS AREA BY EITHER COMMERCIAL FISHERMEN OR ANGLERS.

[3] THIS HARVEST IS ESTIMATED FROM FALL DIP NETTING PERMITS FOR WHITEFISH.

[4] BLACK BASS HARVEST ON INLAND LAKES INCLUDE CRAPPIES.

[5] TOTAL DOES NOT INCLUDE FISH SUCH AS SUCKERS, LING, CISCO, ETC.

[6] ONE (1) KG EQUALS 2.205 LBS.

[7] ALLOWABLE YIELD BY SPECIES FOR SHOAL LAKE INCLUDED IN SPECIES COLUMN IN "ALL DISTRICT LAKES" TOTAL SPECIES COLUMN.

* INDICATES ALLOWABLE YIELD IS GREATER THAN THE TOTAL FOR ALL THE SPECIES LISTED BY THE AMOUNT SHOWN.

** DIFFERS FROM "UNACCOUNTED" IN LAKE OF THE WOODS IN THAT SPECIES SUCH AS STURGEON, CRAPPIE AND SAUGER ARE LITTLE UNDERSTOOD ON INLAND LAKES. THIS ALSO INCLUDES "UNACCOUNTED" AND SPECIES HARVEST LISTED IN LAKE OF THE WOODS BUT NOT AVAILABLE FOR INLAND LAKES.

TABLE 2

PROJECTED HARVEST LEVELS BY USER GROUP
(KG/YR)

LAKE/BASIN	SPECIES	NAT. SUBS. (KG/YR)	SPORT HARVEST RES OF ONT.	SPORT HARVEST NRES OF ONT.	COMMERCIAL HARVEST	TOTAL HARVEST	ALLOWABLE YIELD	OVER EXPLOIT.
LAKE OF THE WOODS								
NORTH SECTOR								
	WALLEYE	3,361	9,636	21,649	9,900	44,546	31,089	YES
	NORTHERN PIKE	1,833	2,727	8,019	20,300	32,879	27,757	YES
	WHITEFISH	545	—	—	5,438	5,983	11,102	NO [1]
	LAKE TROUT	98	1,818	1,145	364	3,425	5,550	NO [1]
	BLACK BASS	916	910	5,153	—	6,979	18,900	NO
	SAUGER	397	864	1,775	—	3,036	5,550	NO
	CRAPPIE	174	136	400	858	1,568	1,886	NO
	YELLOW PERCH	371	114	573	—	1,058	5,550	NO
	UNACCOUNTED *	—	227	573	—	800	1,666	NO
	TOTAL	**7,695**	**16,432**	**39,287**	**36,860**	**100,274**	**109,050**	**NO**
CENTRAL SECTOR								
	WALLEYE	—	7,225	43,646	18,182	69,053	47,880	YES
	NORTHERN PIKE	—	1,377	8,287	24,720	34,384	34,200	YES
	WHITEFISH	—	—	—	3,425	3,425	5,136	NO [1]
	BLACK BASS	—	275	1,632	—	1,907	29,090	NO
	SAUGER	—	140	839	—	979	13,680	NO
	CRAPPIE	—	45	113	1,889	2,047	2,992	NO
	YELLOW PERCH	—	37	265	—	302	8,550	NO
	UNACCOUNTED *	—	40	58	—	98	2,136	NO
	TOTAL	**—**	**9,139**	**54,840**	**48,216**	**112,195**	**143,664**	**NO**
SOUTH SECTOR								
	WALLEYE	3,722	5,537	87,406	66,340	163,005	132,455	YES
	NORTHERN PIKE	2,040	845	13,154	79,415	95,454	94,590	YES
	WHITEFISH	109	—	—	—	109	1,000	NO [1]
	BLACK BASS	1,020	123	2,044	—	3,187	65,090	NO
	SAUGER	409	500	2,123	—	3,032	43,955	NO
	CRAPPIE	204	82	756	5,245	6,287	7,500	NO
	YELLOW PERCH	44	40	542	—	626	23,680	NO
	LAKE STURGEON	—	—	—	4,500	4,500	4,545	NO
	UNACCOUNTED *	218	200	1,317	—	1,735	5,135	NO
	TOTAL	**7,766**	**7,327**	**107,342**	**155,500**	**277,935**	**377,950**	**NO**

continued.....

TABLE 2

PROJECTED HARVEST LEVELS BY USER GROUP
(KG/YR)

LAKE/BASIN	SPECIES	NAT. SUBS. (KG/YR)	SPORT HARVEST RES OF ONT.	SPORT HARVEST NRES OF ONT.	COMMERCIAL HARVEST	TOTAL HARVEST	ALLOWABLE YIELD	OVER EXPLOIT
LAKE OF THE WOODS								
WHITEFISH BAY								
	WALLEYE	1,487	1,827	16,598	—	19,912	11,600	YES
	NORTHERN PIKE	1,487	1,718	19,483	—	22,688	13,400	YES
	WHITEFISH	446	45	517	—	1,008	9,295	NO [1]
	LAKE TROUT	247	614	5,996	—	6,857	9,295	NO [1]
	BLACK BASS	718	345	3,918	—	4,981	9,875	NO
	SAUGER	49	18	207	—	274	590	NO
	CRAPPIE	49	23	258	—	330	909	NO
	YELLOW PERCH	49	14	155	—	218	1,455	NO
	UNACCOUNTED *	—	68	744	—	812	1,136	NO
	TOTAL	**4,532**	**4,672**	**47,876**	—	**57,080**	**57,555**	**NO**
SABASKONG BAY								
	WALLEYE	2,477	2,886	47,966	—	53,329	28,682	YES
	NORTHERN PIKE	1,238	1,723	28,814	—	31,775	22,409	YES
	BLACK BASS	247	89	1,483	—	1,819	12,545	NO
	SAUGER	297	86	1,467	—	1,850	7,182	NO
	CRAPPIE	124	36	641	—	801	4,455	NO
	YELLOW PERCH	247	45	774	—	1,066	4,455	NO
	UNACCOUNTED *	247	109	1,836	—	2,192	8,045	NO
	TOTAL	**4,877**	**4,974**	**82,981**	—	**92,832**	**87,773**	**YES**
TOTAL								
	WALLEYE	11,047	27,111	217,265	94,422	349,845	251,706	YES
	NORTHERN PIKE	6,598	8,390	77,757	124,435	217,180	192,356	YES
	WHITEFISH	1,100	45	517	8,863	10,525	26,533	NO
	LAKE TROUT	345	2,432	7,141	364	10,282	14,845	NO
	BLACK BASS	2,901	1,742	14,230	—	18,873	135,500	NO
	SAUGER	1,152	1,608	6,411	—	9,171	70,957	NO
	CRAPPIE	551	250	2,168	7,992	10,961	17,742	NO
	YELLOW PERCH	711	322	2,309	—	3,342	43,690	NO
	STURGEON	—	—	—	4,500	4,500	4,545	NO
	UNACCOUNTED *	465	644	4,528	—	5,637	18,118	NO
	TOTAL	**24,870**	**42,544**	**332,326**	**240,576**	**640,316**	**775,992**	**NO**

continued.....

TABLE 2

PROJECTED HARVEST LEVELS BY USER GROUP
(KG/YR)

LAKE/BASIN	SPECIES	NAT. SUBS. (KG/YR)	SPORT HARVEST RES OF ONT.	SPORT HARVEST NRES OF ONT.	COMMERCIAL HARVEST	TOTAL HARVEST	ALLOWABLE YIELD	OVER EXPLOIT.
SHOAL LAKE							108,100 [2]	YES
INLAND LAKES								
	WALLEYE	63,973	12,454	158,663	10,346	245,436	151,710	YES
	NORTHERN PIKE	29,079	4,770	60,777	14,544	109,170	146,484	NO
	WHITEFISH	13,958	687 [3]	—	152,710	167,355	101,847	YES
	LAKE TROUT	3,489	5,464	69,607	263	78,823	36,556	YES
	BLACK BASS [4]	1,163	2,446	31,167	—	34,776	126,425	NO
	YELLOW PERCH	1,745	—	—	—	1,745	41,849	NO
	UNACCOUNTED *	2,908	—	—	—	2,908	70,153	NO
	TOTAL	**116,315**	**25,821**	**320,214**	**177,863**	**640,213**	**675,024**	**NO**
ALL DISTRICT LAKES								
	WALLEYE	75,020	39,565	375,928	104,768	595,261	436,517	YES
	NORTHERN PIKE	35,677	13,160	138,534	138,979	326,350	366,425	NO
	WHITEFISH	15,058	732	517	161,573	177,880	148,240	YES
	LAKE TROUT	3,834	7,896	76,748	627	89,105	51,400	YES
	BLACK BASS	4,064	4,188	45,397	—	53,649	280,680	NO
	YELLOW PERCH	2,456	250	2,309	—	5,015	91,039	NO
	OTHER **	1,919	644	4,558	—	7,121	184,815	NO
	TOTAL [5]	**141,185**	**68,365**	**652,570**	**418,439**	**1,280,559** [6]	**1,559,116** [7]	**NO**

[1] OVER-EXPLOITATION NOT INDICATED BY PRESENT HARVESTS BECAUSE PAST OVER-EXPLOITATION AND HABITAT DEGRADATION HAVE RESULTED IN THESE SPECIES BEING UNDERPRODUCING.

[2] NO PROJECTED HARVEST FIGURES AVAILABLE FOR SHOAL LAKE. FISHERIES ARE NOT EXPECTED TO BE FULLY RECOVERED BY YEAR 2000.

[3] THIS HARVEST IS ESTIMATED FROM FALL DIP NETTING PERMITS FOR WHITEFISH.

[4] BLACK BASS HARVEST ON INLAND LAKES INCLUDE CRAPPIES.

[5] TOTAL DOES NOT INCLUDE FISH SUCH AS SUCKERS, LING, CISCO, ETC.

[6] ONE (1) KG EQUALS 2.205 LBS.

[7] ALLOWABLE YIELD BY SPECIES FOR SHOAL LAKE INCLUDED IN SPECIES COLUMN IN "ALL DISTRICT LAKES" TOTAL SPECIES COLUMN.

* INDICATES ALLOWABLE YIELD IS GREATER THAN THE TOTAL FOR ALL THE SPECIES LISTED BY THE AMOUNT SHOWN.

** DIFFERS FROM "UNACCOUNTED" IN LAKE OF THE WOODS IN THAT SPECIES SUCH AS STURGEON, CRAPPIE AND SAUGER ARE LITTLE UNDERSTOOD ON INLAND LAKES. THIS ALSO INCLUDES "UNACCOUNTED" AND SPECIES HARVEST LISTED FOR LAKE OF THE WOODS BUT NOT AVAILABLE FOR INLAND LAKES

2.3.3 Commercial Fishermen — Food

There were 44 licenced areas on Lake of the Woods and 24 licenced areas on inland lakes being commercially fished in Kenora District as of December 1985. Not all areas on Lake of the Woods are commercially fished. Commercially fished inland lakes are generally a minimum of 2000 ha in surface area, but size alone does not determine whether or not a lake is fished. A variety of biological, social and economic factors are also considered. All commercially fished lakes are shown on Figure 4 (located in the back cover of this plan).

In 1984, the total district catch was 770,282 kg (1,698,472 lb), which included quotaed and non-quotaed species.

Commercial fishing for walleye in Shoal Lake was closed in 1983 because of a collapse of stocks. Previously, it had been one of the most important fisheries in the District.

Walleye is the most important species to the commercial fishery on Lake of the Woods while whitefish are most important on inland lakes. The gross value of the commercial fishery in the Kenora District was estimated to be $626,000 in 1985.

The projected commercial harvest of all fish in the year 2000 was 796,074 kg (1,755,343 lb). However, this projection is not likely very accurate since MNR has an active 'willing seller, willing buyer' initiative. MNR will consider purchase of commercial fishing licenses from any commercial fisherman with game species who is interested in selling his or her licence. Should MNR purchase the licence, the licence, with all quotas, is retired.

Projections are actually targets and will be discussed later in this plan.

Individual species quotas are designed to stabilize harvest at the allowable yield. Quotas may increase or decrease, dependent upon population fluctuations.

Tables 1 and 2 give current and projected (see above) commercial fish harvests for both Lake of the Woods and inland lakes **(species with quota management only)**.

2.3.4 Indian Subsistence Harvest

Current and projected harvests were determined by use of an annual fish consumption rate per individual. Per capita fish consumption for Indians living on the shores of Lake of the Woods has been estimated at 35 kg/yr (77 lb), although only 2/3 of this consumption came from Lake of the Woods. Presumably, the other 1/3 of fish consumption comes from inland lakes.

Consumption of fish by Indians living on Grassy Narrows Reserve #21 and Islington Reserve #29 differs because of mercury pollution in the English-Wabigoon river system. As a result, approximately 9,000 kg (19,845 lb) of fish have annually been supplied since 1975 to these two reserves from mercury-free waters in northwestern Canada (Lake Winnipegosis in Manitoba and Great Slave Lake in Northwest Territories). According to the Ontario Ministry of the Environment, mercury levels in fish from the English-Wabigoon system are not expected to decline to acceptable consumption levels for Indians by the year 2000.

For 1985, total Indian consumption of fish from the Kenora District waters was 121,725 kg (268,404 lb). Approximately one half of these fish, or 64,539 kg, were estimated to be walleye. The balance consisted mainly of northern pike (25%) and lake whitefish (10%), with smaller amounts of lake trout, black bass, crappies, lake sturgeon and others.

The Indian population living on Indian reserves is projected to increase from the present 3735 (1981) to 4291 in the year 2000. An increase in fish consumption (demand) from Kenora District waters is expected to rise to 150,185 kg/yr (331,158 lb).

These figures are based upon a number of assumptions which were itemized in the document "Kenora District Fisheries Management Plan, A Summary".

Tables 1 and 2 summarize current and projected Indian subsistence harvest.

A dollar value for Indian fisheries is not available. However, the Indian people view the fishery as one of their most valued resources.

2.3.5 Tourist Operators

In 1986, there were 172 tourist accommodation operations, 49 outpost camps and 12 commercial houseboat operations in the Kenora District. Lodges are concentrated around the population centers of Sioux Narrows, Nestor Falls, and Kenora in the Kenora District and Morson in Fort Frances District. Other main base lodges are scattered throughout the District from the English River system south. The majority of outpost camps are located north of the English River system. All houseboat operators are on Lake of the Woods.

All mainbase lodges and outpost camps located in Kenora District are shown on Figure 4 (located in the back cover of this plan).

Since 1980, the number of lodges and outpost camps has remained relatively stable but the number of houseboat operations have approximately trebled.

Recent trends indicate little growth or expansion in tourist accommodation businesses in Kenora District.

All game fish species are sought by anglers staying at tourist facilities.

For tourists using accommodations during their fishing trip on Lake of the Woods (1980), 57% were housed in main base lodges and cabins, 39% stayed at campgrounds and 3% used houseboats. Because of the dramatic increase in the number of commercially operated houseboats since 1980, these figures may have changed considerably.

On inland lakes the tourist accommodation business has been changing as a response to increasing road access and the Crown Land Camping regulations. One change is that fewer main base lodges are now fly-in. The future of outpost camps and fly-in fisheries is dependent upon the Crown Land Camping Program, exact road placement and flexibility of the camp owners themselves with respect to marketing fishing opportunities.

As mentioned in section 2.3.1, gross tourism revenues were estimated at a minimum of $23 million in 1985. Actual revenue is considerably higher, especially now, considering expansion in the houseboat industry on Lake of the Woods and the fact non-resident cottage owners who fish (and in reality are tourists) were not part of this calculation.

2.3.6 Non-consumptive Users

A non-consumptive user is when someone looks at fish or fish habitat but is not trying to catch fish. The only areas which can be considered viewing areas are road accessible creek spawning sites, some of which are fish sanctuaries. The number of people who participate in this activity is small and many are not really non-consumptive users, as they are actually dipping suckers or whitefish (except, of course, in fish sanctuaries). Non-consumptive use is not expected to grow by an appreciable amount.

2.4 NON-FISHERIES DATA

Fish production and fisheries management are and have been influenced by development and land use practices not directly related to fisheries.

For example, much of the District is or will be accessed by a vast network of roads built primarily for timber management purposes. These roads access timber resources in two Crown Management Units (Minaki C.M.U. and Aulneau C.M.U.) and two Forest Management Agreement areas whose signatory is Boise Cascade of Canada Ltd. (Lake of the Woods F.M.A. and Pakwash F.M.A.). Roads designed to access timber on occasion provide fishermen access to previously remote, unaccessible lakes.

Water levels on Lake of the Woods are controlled by two hydro electric dams at the outlet to the Winnipeg River. Hydro electric dams are also located at Caribou Falls where the English River meets the Winnipeg River and at Whitedog Falls on the Winnipeg River between Roughrock Lake and Tetu Lake. In addition to hydro electric dams, the MNR maintain water level control dams at Nestor Falls, Dogpaw Lake, Ena Lake, Crow (Kakagi) Lake, Blindfold Lake and Longbow Lake.

Dams can alter fish habitat and restrict fish movement but can also serve to maintain static water levels at critical times of the year (eg. during spawning runs).

Industries and land use practices can alter water quality, fish palatability and fish habitat. For example, serious industrial pollution has occurred in the English-Wabigoon River system which has resulted in some fishes becoming unsuitable for unrestricted human consumption. Fish yields may thus be directly or indirectly impacted upon.

2.5 OVERVIEW

There have been many concerns and issues associated with fisheries management in Kenora District. Many were identified in previous planning exercises (eg. DLUG) while others have been identified recently during the present (this) fisheries management planning process. A number of problems and issues have become apparent from the public consultation which has been an integral part of all recent resource management plans done by the Ministry of Natural Resources. The most pressing, overall problem readily apparent from all data and analysis is that demand for fish exceeds the supply and will increase to an even larger degree in the future, unless corrective measures are taken.

In general, all concerns, problems and issues can be summarized under four general categories. They are:

(i) Availability of Fish and Fishing Opportunities

Loss or substantial reduction of individual fish stocks has been identified in many waters of Kenora District. These changes result in the reduction of the number of fishing opportunities available and increased competition for remaining stocks. Over-exploitation and illegal harvest are major causes of fish stock loss, although the introduction of non-indigenous species (eg. smallmouth bass) may result in competition for food and/or space, could introduce diseases or parasites and can even alter (indirectly) angling quality (eg. smelt introduced into lake trout lakes generally results in larger lake trout but angling success declines. In addition to reduced angling success, many anglers claim smelt also affect palatability of lake trout. See Lake Trout. (iv)

Public Awareness and Scientific Knowledge, *Problem/Issue 1.). Thus many, if not most, introductions* are to the detriment of native fish stocks.

Tables 1 and 2 suggest overharvests (especially walleye, pike and lake trout) exist and will continue to occur. Overharvesting can only occur during the "fishing up" period, which means more fish are being caught (and killed) than can be if the fishery is to sustain itself. Thus Tables 1 and 2 suggest it is critical to reduce harvests now before the fishery in Kenora District declines by a substantial amount.

The collapse of the Shoal Lake walleye fishery is the most notable example of over-exploitation in Kenora District. However, it does not appear that Shoal Lake is the only example of fish stock collapse from over-exploitation. Warm-water and/or cold-water fisheries in Dogtooth Lake, Malachi Lake, Black Sturgeon and a number of other, smaller lakes are also strongly suspected of having been subjected to high harvest pressures, and thus a loss of fish and fishing opportunities.

Of all warm and/or cold water species in Kenora District, the lake trout appears to be the most vulnerable to over-exploitation. All lake trout lakes in the district have been or have the potential to be fished at levels which exceed allowable yields. Once a population of a species like lake trout is fished down, even light harvest pressures may be enough to prevent the stock from rebuilding. As a result, fishing stays poor.

Fishing opportunities for particular species may be impacted negatively by the introduction of exotics. Black bass, both smallmouth and largemouth, have been widely introduced to waters within Kenora District. Black bass may compete for food and space with other species, for example walleye. Walleye will probably continue to thrive but at a lower density level. Smallmouth harbour a parasite that under high densities could affect the reproductive capability of walleye.

Smelt have now found their way into at least one lake in the Kenora District and have also appeared in some nearby waters in Red Lake, Sioux Lookout and Atikokan Districts. Smelt introductions can affect abundance and possibly even survival of native cisco or whitefish besides affecting lake trout fisheries as described above.

Historically, fishing opportunities have meant 'the opportunity to catch and kill fish'. When opportunities (as just defined) declined, the results were:

1) it took longer to catch the same number of fish;

2) a search for 'new' fishing holes had to be undertaken when old fishing holes were fished out;

3) the average size of fish tended to decrease; *and*

4) really large fish (trophies) became exceedingly rare.

THE PROBLEMS ASSOCIATED WITH THE OVERHARVEST OF FISH CAN BE ADDRESSED IF CATCHING FISH, AS OPPOSED TO KILLING FISH, BECOMES THE PRIORITY.

(ii) Environmental Quality

The degradation of fish habitat can reduce or destroy the capability of a particular waterbody to produce fish. In addition, the presence of contaminants may render fish flesh unsuitable for human consumption.

Loss of environmental quality can arise from a number of sources.

With respect to contaminants, many waterbodies in Kenora District have high levels of mercury from both natural and human related activities. The problem is greatest in the English-Wabigoon River system where high levels of mercury from industrial sources has resulted in some species and sizes of fish having consumption restrictions.

The paper mill situated in Kenora is a source of chemical and biological pollution where it discharges into the Winnipeg River.

Improvement to the mill effluent have been made in recent years but some toxicity is still apparent.

The other main contaminant in the district is sewage from municipal and domestic sources. Sewage input into water systems can increase nutrient levels and result in habitat changes which are undesirable for the species present. Concerns have been raised over possible impacts on water conditions caused by malfunctioning septic systems in some parts of Lake of the Woods.

In Kenora District, fish spawning habitat, particularly walleye spawning habitat, has been impacted upon in some instances from road building. Most roads have been built to access timber resources although roads built for other purposes have also affected walleye and other fish habitat. Impacts generally involve blockage of access to spawning areas or destruction of the spawning area itself as a result of poor stream crossing methods.

Shoreline development, particularly from cottage subdivisions, has also resulted in the destruction and/or degradation of fish habitat in some areas. Fish spawning habitat has been impacted the most but in some places (eg. Sherwood Lake) intensive cottage development is suspected to have altered water quality as well.

Resource development activities such as timber harvesting and mineral exploration and development have also affected some fisheries. Corrective measures to alleviate future problems include

comprehensive plan reviews and implementation of specific tactics (eg. controlled shoreline harvesting of timber based on slope, depth of soil, etc.) to protect fisheries.

A variety of atmospheric pollutants, collectively and commonly referred to as 'acid rain', has so far had only minimal impact upon Kenora District fisheries. However, acid rain levels have risen considerably in the last decade and if this trend continues, it poses a major environmental threat to the long-term health of district fisheries resources. Because most Kenora area lakes are low in nutrients and have little capability to withstand acid rain (low buffering capacity), potential negative impacts are enormous.

Some industrial and domestic chemicals once considered safe are now believed to be environmentally damaging (eg. DDT). It is therefore quite possible "new" pollutants may be found to be affecting Kenora District fish populations in the future.

In summary, the loss of environmental quality has, in the past, resulted in the loss of fisheries potential. Maintenance of fish habitat, including water quality itself, is essential to fish production.

(iii) Conflicts Among Users of the Environment and the Resource

The main user groups of the fisheries resource in the Kenora District are as follows (arranged in alphabetical order):

i) anglers — resident — residents of Ontario
— non-resident — residents of U.S.A.
— residents of Manitoba

ii) commercial fishermen (bait)

iii) commercial fishermen (food)

iv) Indian people

v) tourist operators

Consumptive fish users are not the only people whose use of the resource causes conflicts. Cottagers, campers, loggers, miners, etc., all have potential to impact upon fish and fish user groups. Conflicts between the main user groups and these secondary users can be classed as either a) conflicts over use of space (eg. a remote lake is developed for cottages), or b) conflicts over loss of environmental quality and thus loss of fish potential [discussed above, 2.5 (ii)].

Conflicts over fish are expected to be greatest between the main fisheries user groups as identified above. For example, most anglers (resident and non-resident) are not opposed to commercial fishing **per se**, but are opposed to the commercial harvest of sporting species such as walleye, lake trout and muskellunge. At the present time, this type of conflict is most notable on Lake of the Woods, Sand Lake and Dogtooth Lake.

In all cases, conflicts are greatest when demand and use of the resource exceeds the supply. In Kenora District, use conflicts are therefore greatest over walleye and lake trout. Non-resident of Ontario anglers (both using and not using facilities provided by tourist operators) have been identified as the largest component of the harvest of these two species.

Another area of conflict involves the question of access. Generally, residents desire road access to remote lakes but tourist operators with outpost camps or boat caches are concerned over the impact of access to their businesses.

Recently, the conflicts over use of the fisheries resource with Indian people (Treaty 3 in Kenora District) has intensified. This has resulted from negotiations taking place between Indian groups and the Provincial and Federal governments who are addressing the unresolved issue of Indian use of and access to the fishery. Resolution of this issue may have implications on future fishery allocation decisions.

This plan recognizes many of the basic issues including subsistence requirements and commercial use of fish resources by the Indian community. Plan amendments will occur if and when these agreements require changes in the document.

(iv) Public Awareness and Scientific Knowledge

In general, the public is not aware of many of the constraints and difficulties associated with managing a fishery. In the past, unrealistic demands have often been placed upon the resource (eg. fish and fish habitat) by users. The result was the resource was given little consideration when developments with a potential to impact upon the resource (eg. industrial effluents, cottage lot subdivisions) were undertaken.

It is also apparent that fisheries managers have often done a poor job of explaining to the public the physical and biological constraints of the fishery.

From public responses received and ongoing discussions with user groups, there seems to be widespread need and support for implementing and expanding public education programs. It is important for people to understand why particular management techniques were chosen over others. Managers and the public can accomplish much more by working together towards a common goal.

Good management is ultimately the result of good science. The scientific knowledge gained from ongoing fisheries monitoring and research in the Kenora District and elsewhere is essential in both the long-term and short-term perspectives.

3.0 MANAGEMENT DIRECTION

3.1 GENERAL FISHERIES MANAGEMENT OBJECTIVES

The general fisheries goal of the Ministry of Natural Resources is as follows:

To protect, rehabilitate, enhance and maintain the district's fish communities and their environment to provide an optimum contribution of fish, fishing opportunities and associated benefits to society.

For each species or species group, objectives, targets, strategies and tactics have been developed following general fisheries management principles.

In general, the fish which anglers seek to catch (eg. walleye, northern pike, lake trout, muskellunge, etc.) will be managed below allowable yield with respect to harvest. To achieve this objective will necessitate the implementation of strategies and tactics designed to reduce (actually eliminate) the kill of 2.0 kg of fish per angler-day (4.4 lb) (as defined by DLUG), while maintaining if not improving the actual numbers of fish anglers catch (eg. catch <u>but not</u> kill).

Stewardship of the fishery will have to become a greater priority with all user groups in the future. This will require improving communication between and among user groups and increasing the involvement of the public in directing fisheries management. Expectations of what can be accomplished must be realistic with respect to both resource capability and management operability.

3.2 SPECIFIC FISHERIES MANAGEMENT OBJECTIVES, TARGETS AND STRATEGIES

3.2.1 General

All management objectives, targets, strategies and tactics are given in the context of the district resources available. Management of the resource, however, may vary, and in fact often will vary, across the length and breadth of the district. This type of management direction not only reflects district land use zoning intent first identified in **DLUG**, it allows for fine-tuning fisheries management now and in the future. It also recognizes distribution and use of the resource itself.

The creation and use of Fisheries Management Zones (**FMZ's**) facilitates this management approach.

Some of the problems and issues along with relevant optional management strategies and tactics, which were discussed during the public consultation phase, have been modified or discarded in this plan. Obviously, some were changed or do not appear because a choice of preferred strategies and tactics was made. In other instances, a suspected problem/issue was identified as not really being one while new problems/issues were identified.

3.2.2 Management Zones

Fisheries Management Zones have been established across the district. Many FMZ's are only partly in Kenora District; similarities with both the resource and resource use patterns in some areas of this district and adjoining districts indicated common approaches to management direction inherently made sense. In addition, FMZ's are areas of ecological similarity.

Each FMZ is delineated using recognizable physical features for boundaries wherever possible. The most noticeable exception to this are those FMZ's that border Manitoba. All FMZ's in Kenora District are shown on Figure 5, located in the back pocket of this document.

FMZ's will often identify specific management actions. They also establish logical boundaries for data collection and will thus allow MNR to assess the effectiveness of management actions initiated.

Creation of FMZ's does not prohibit or control other activities (eg. logging, mining) unless specifically identified as doing so (eg. Crown land cottaging) in the following section on management intent.

3.2.2.1 Management Intent

Kenora District contains all or portions of 13 Fisheries Management Zones (two FMZ's, 18 and 37, affect only small areas in Kenora District and are not discussed further in this plan). For clarity and consistency, **each FMZ in the NORTHWEST REGION of MNR has been given a specific number. This is why FMZ numbers in this plan are not numbered consecutively**. In this section, each FMZ lying completely or partially in Kenora District (except FMZ's 18 and 37) is described and a brief description of the management intent for the zone is given.

Some terminology used in the following descriptions of FMZ's have fairly narrow definitions. Those words or phrases and what they mean are included in the Glossary of Terms at the back of this plan.

Management intents for each proposed fisheries management zone are given below.

FMZ 2

This zone is situated primarily in the MNR District of Fort Frances. In Kenora District, Kakagi (Crow) Lake

is the main water body in this zone. Most waters in this zone are lake trout lakes and management will be directed primarily towards lake trout. Specifically, the management intents are:

- **enhance the quality of lake trout and warmwater angling opportunities;**
- **maintain tourism facilities catering primarily to anglers but not at the expense of increasing the harvest of fish; and**
- **no new Crown land cottage subdivisions.**

The essence of these management intents is to increase the number of fish anglers catch while not expanding fisheries related developments (tourist accommodation businesses or cottages). Fish catches can be increased by reducing the kill and/or directing angler effort towards other species (eg. whitefish).

FMZ 3

This FMZ lies across the three MNR Districts of Kenora, Fort Frances and Dryden. Most species are found in this management zone but the most important species is lake trout. This zone lies immediately north of FMZ 2 and in Kenora District goes north to the Highwind Lake Road. Its western boundary is Lake of the Woods (FMZ 8). Specific management intents are:

- **manage specific lakes for trophy fish (primarily lake trout and in some lakes muskellunge and northern pike as well) opportunities;**
- **enhance the quality of lake trout and warmwater angling opportunities;**
- **maintain tourism facilities catering primarily to anglers but not at the expense of increasing the harvest of fish;**
- **maintain as a zone with limited direct road access to lakes; and**
- **no new Crown land cottage subdivisions.**

This area is relatively undeveloped and contains a number of large lakes suitable for trophy fish management. Some of these lakes could be managed with special regulations to ensure the future of trophy fishing. Overall reductions in the kill will help to improve the numbers of fish caught. No expansions in cottaging are proposed and changes in tourism that have the potential to increase fish harvests will be discouraged. Roads constructed for timber or mining purposes will be planned to avoid direct access to waters with lake trout, muskellunge and/or walleye.

FMZ 8

Lake of the Woods makes up this fisheries management zone. As such, it has greater fisheries potential in terms of allowable yield than all other zones or portions of zones in Kenora District. This zone also has the most diverse of user groups, including several Indian Bands, a wide range of tourism facilities, extensive cottage lot subdivisions, commercial food fish fisheries and municipalities. Management intents for this complex zone are:

- **enhance the quality of warmwater fishing opportunities;**
- **manage lake trout for trophy fishing opportunities;**
- **increase the sportfishing allocation to anglers;**
- **reduce the sportfish allocation to commercial fishermen;**
- **maintain existing tourism values, recognizing the complexity of the actual user groups;**
- **minimize fisheries harvests by non-resident day-users; and**
- **no new Crown land cottage subdivisions.**

Fisheries management on Lake of the Woods will move toward continuing to reduce the catch of sportfish by commercial fishermen and accommodating increasing numbers of anglers as a result of continuing development of private lands for cottage development and increased average accommodation levels at existing tourism facilities. Tourism based primarily on the fishery will remain more or less static, although tourism based on other types of activities will not be discouraged. Monitoring of non-resident day-users will determine the upper limit of their harvest before further restrictions are considered.

FMZ 9

This relatively small FMZ is comprised of the Aulneau Peninsula and the Western Peninsula including all areas from south of Shoal Lake to the Manitoba border. This zone contains only small to medium sized warmwater lakes none of which are presently road accessible. The intent here is for remote angling opportunities managed in a similar fashion to FMZ 12, the area north of the English-Wabigoon River system and itemized as follows:

- **enhance remote, quality warmwater fishing opportunities;**
- **maintain the present tourism capacity; and**
- **no new Crown land cottage subdivisions.**

Management of this relatively small area for remote fishing opportunities will help provide diversity to the

fishing experiences available to the immediate Lake of the Woods area.

FMZ 10

This zone is comprised of many small to medium sized lakes and lies wholly within the Kenora District. The southern boundary of this zone is the north shore of Lake of the Woods, the northern boundary is the CNR line, the eastern boundary is the Jones Road (excluding Silver Lake) and the western boundary is the Manitoba border. The Winnipeg River bisects this FMZ and is excluded from this zone. Specific management intents here are:

- **enhance warmwater and coldwater fishing opportunities;**
- **enhance angling opportunities for non-trophy muskellunge;**
- **maintain existing tourism values, recognizing the complexity of the actual user groups;**
- **manage for increased road access; and**
- **meet demand for Crown land cottage development.**

Fishing can be improved in this zone through habitat rehabilitation and perhaps innovative techniques such as slot-sizes. In addition, many fish species are far from fully utilized in this zone (eg. bass, crappie, tullibee) and can offer presently unrealized opportunities. Many lakes have populations of small muskellunge and the possibility of harvesting some of these fish will be examined. Highway construction, private land development for cottages and logging are resulting in increased road access which is expected to be permanent. If demand for more Crown land cottage development becomes apparent it will be directed towards this zone (but not on lake trout or muskellunge lakes). Tourism establishments based on increased angling opportunities will not be planned for, but, as on Lake of the Woods, tourism based on other than fishing opportunities will be encouraged.

FMZ 11

The English River and Winnipeg River make up this FMZ. The uniqueness of river systems and their higher productivity are the main reasons for their status as a separate FMZ. The specific management intents are:

- **enhance the quality of warmwater fishing opportunities;**
- **investigate potential for tourism expansion; and**
- **no new Crown land cottage subdivisions.**

Proposed size limits, habitat rehabilitation and shifting angler pressure to underutilized species can improve fishing opportunities in this zone. Productivity of river systems may be considerably greater than estimates used for the purposes of this plan. Revised estimates along with more accurate assessment of present and projected use, may result in surplus fish stocks being identified which could be used through expansion of the tourist industry. Development of private lands for cottages will continue but no new Crown land cottage developments will occur.

FMZ 12

This FMZ is north of the English River as far as Woodland Caribou Provincial Park. Westward it runs to the Manitoba border and eastward to the shores of Sydney Lake and Conifer Lake in Red Lake District. There are numerous high quality warmwater fisheries in this FMZ as well as a few excellent lake trout fisheries. This area is presently being road accessed, having been a fly-in fishery in the past. Specific management intents are:

- **enhance remote, warmwater and lake trout fishing opportunities;**
- **maintain tourism facilities catering primarily to anglers but not at the expense of increasing the harvest of fish; and**
- **no new Crown land cottage subdivisions.**

Although roads are being built in this area, care is being taken to avoid directly accessing lakes heavily used by tourism. This will involve both road placement, camping restrictions and, in some instances, travel restrictions. Travel restrictions may apply to non-residents of Canada only, or, in some instances, both non-residents and residents of Canada. New opportunities to access lakes not presently being fished, or which have species of fish not presently being used may exist and access will be examined on a case-by-case basis. No expansion of the tourist industry based on killing more fish will be encouraged and no Crown land cottage developments will be planned.

FMZ 13

There are a mixture of warmwater and lake trout fisheries in this zone. The zone is fairly well accessed by road although relatively remote lakes are still common. Some lakes have moderate numbers of cottages. The zone is situated east of the town of Kenora mainly between Jones Road and the Gordon Lake Road. Specific management intents are:

- **enhance the quality of warmwater and coldwater fishing opportunities;**
- **maintain tourism facilities catering primarily to anglers but not at the expense of increasing the harvest of fish;**

- **maintain a mixture of accessible and relatively inaccessible lakes; and**
- **no new Crown land cottage subdivisions.**

Habitat rehabilitation, promotion of fish other than walleye and lake trout and limiting the kill of large sportfish will be the main ways to improve fishing opportunities in FMZ 13. With respect to road development, tourism and cottage development, the focus will be on maintenance of the status quo.

FMZ 14

This relatively small zone contains mostly lake trout lakes. However, many of these lakes also support populations of warmwater species and are well known for the trophy walleye they produce. Direct and/or indirect access exists here. Some lakes have cottages and/or tourism facilities and there is one provincial park in existence and another one planned for the future. The specific management intents are:

- **manage for high quality (trophy) walleye fishing opportunities;**
- **enhance the quality of warmwater and coldwater fishing opportunities;**
- **maintain tourism facilities catering primarily to anglers but not at the expense of increasing the harvest of fish;**
- **maintain the present capacity in existing Provincial Parks;**
- **manage for planned increases in road accessibility; and**
- **no new Crown land cottage subdivisions.**

Already experiencing relatively good access and heavy angling pressure, even greater access and more fishing pressure is anticipated (a Provincial Park on Winnange Lake, in Dryden District will be developed at some future date). Lakes in this zone are noted for both numbers and size of fish they produce (although not necessarily both in the same lake). Emphasis in FMZ 14 will be on limiting the kill of fish while providing liberal opportunities to catch them. Cottage construction and tourism establishments are not expected to increase in number and no increase in the number of available campsites at Rushing River Provincial Park is proposed. No new Crown land cottage developments are planned.

FMZ 19

This zone is primarily in Dryden District. Remote high quality fishing on primarily cold water lakes is being planned. In Kenora District, only a small number of warmwater fisheries in the northeast corner of the District are in this zone and affected by the zonal management intents. This zone is not discussed further in this plan.

FMZ 36

Woodland Caribou Provincial Park and FMZ 36 are one and the same. Fisheries management in the Park is directed from the Red Lake District. Since only a very minor component of the Park is in Kenora District, management intents will be determined and shown in the Fisheries Management Plan for Red Lake.

3.2.3 Sportfish

In Kenora District, the term 'sportfish' refers specifically to the following species and/or species assemblages: walleye, northern pike, smallmouth black bass and largemouth black bass (referred to only as black bass, recognizing that in Kenora District smallmouth are far more numerous and widespread than largemouth), black crappie and yellow perch. Although both lake trout and muskellunge are sportfish, they are treated separately because of their unique biology, management needs and sensitivity to exploitation.

Strategies and tactics presented here are issue oriented and sometimes zone specific in order to achieve a specific management intention.

3.2.3.1 Management Objective

To provide for optimum social and economic benefits derived from sportfish while maintaining self-sustaining populations.

3.2.3.2 Targets

Targets are goals for which to strive. Generally, the fish management plan for Kenora District will attempt to:

1) provide high quality angling by attempting to lower the harvest of fish (in terms of total kg's);
2) direct harvest towards the younger, more expendable age classes; and
3) minimize the restrictions which would limit the opportunity of anglers to go fishing.

Management intents for most zones suggest little expansion in either tourism facilities or Crown land cottages will occur. However, increases in angler numbers are still projected because of more private land cottage development and higher average accommodation levels at existing tourism facilities.

Five specific sportfish targets have been identified:

1. *To manage for the harvest of sportfish, as a whole and by species, at levels which are below*

allowable yields (total allowable yield of sportfish, including muskellunge, is 1.3 million kg/yr for the District). **Projected** *angler (resident and non-resident) allocation is:*

1.3 million kg/yr (total sportfish allowable yield)
- 0.1 million kg/yr (commercial food fish allocation)
- 0.1 million kg/yr (Indian subsistence sportfish needs)
= 1.1 million kg/yr.

The total sportfish harvest target for anglers will be less than 1.1 million kg/yr.

2. *To manage for expected increases in angler-days (opportunities), from the present 357,676 angler-days to a* **maximum** *projection of 442,302 angler-days.*

3. *To manage for current and projected harvests of* **sportfish** *by Indians for subsistence use, in the absence of a Indian fishing agreement (current harvest, 102,644 kg/yr; projected harvest, 118,920 kg/yr).*

4. *To eliminate the present DLUG kill standard of 2 kg/angler day for residents and non-residents to remain consistent with the above targets (lower the kill but have anglers catch, not kill, more and bigger fish).*

5. *To manage* **specifically** *for trophy (large) fish in some waters and/or FMZ's by further reducing the kill standard while maintaining opportunities.*

3.2.3.3 Problems and Issues — Strategies and Tactics

(i) Availability of Fish and Fishing Opportunities

Problem/Issue 1.

"THE HARVEST OF WALLEYE EXCEEDS THE ALLOWABLE YIELD BOTH IN LAKE OF THE WOODS AND IN INLAND LAKES. SHOAL LAKE AND SOME INLAND LAKES HAVE ALREADY BEEN 'FISHED DOWN'. OF ALL SPORTFISH, WALLEYE ARE THE MOST PREFERRED AND SOUGHT AFTER SPECIES."

1(a). **Strategy**

- Reduce harvest (kill) of walleye to below the allowable yield.

Tactics

- Introduce a maximum size limit of 50 cm (19.5 in) total length. Daily and possession limit of six walleye remains but only one fish can be 50 cm or greater in total length. Size limit to be assessed and adjusted if necessary. This will **initially** apply to all FMZ's except one (FMZ 14). FMZ 14 will have more restrictive limits placed on the catch (See Problem/Issue 2, this Section).
- Create new and/or larger fish sanctuaries. This tactic will, in general, only be considered for FMZ's 8 (Lake of the Woods) and 11 (Winnipeg/English River system), but could be used elsewhere if deemed necessary. Sanctuary status dates will, unless special circumstances dictate otherwise, be April 1st to May 31st, inclusive.
- Introduce an increased combination walleye/sauger limit on Lake of the Woods (FMZ 8). The walleye/sauger combination limit would increase from six to seven **provided at least two fish were saugers.**
- Introduce a slot-size for walleye in FMZ 10, where walleye between 40 cm (16 in) and 50 cm (19.5 in) will be protected. Size limits to be assessed and adjusted if necessary. **Implementation depends upon success of this tactic where it is being tried elsewhere in Ontario.**
- Regulate proposed tourism expansions/ initiatives according to whether or not they will increase harvest of walleye. Recommendations evaluated on a case-by-case basis. Applicable to all District FMZ's.
- Regulate commercial and resident boat caches by examining each request on a case-by-case basis. Applicable to all FMZ's except 8.
- Reduce the walleye limit. Applicable to all FMZ's, **but only to be used if other tactics fail to reduce harvests to acceptable levels.**

The above tactics were chosen for the following reasons:

1. There was strong public opposition in some quarters to lowering the daily and possession limit before other methods of reducing the harvest were tried.
2. Considerable concern has been raised over how to maintain reasonable fisheries where intensive

development has/is occurring. To accommodate this concern has required the use of innovative techniques such as slot-size and maximum size limits.

3. Competition between and among all user groups over access and allocation of walleye stocks is high and increasing.

4. Directing the harvest to younger, smaller fish is a biologically sound practice. Larger, older fish are the breeding component of the population and by surviving to that stage have demonstrated genetic fitness. Protection of breeders also helps to ensure maximum reproduction occurs.

5. Keeping harvest pressures low on large fish will result in more people catching large fish, thus moving towards the goal of a better quality fishery.

6. On Lake of the Woods, walleye are preferred over sauger because walleye are generally larger. However, there is a sizeable surplus of sauger that could be harvested.

1(b). **Strategy**

- Increase the Kenora District production of walleye.

Tactics

- Use adult transfers to stock walleyes in suitable waters where they are presently absent. More applicable to FMZ's 10 and 13 than elsewhere because of heavy demand for existing fisheries.

This tactic has been shown to be the most cost-effective means of achieving the associated strategy. However, in Kenora District, adult transfers probably have limited applicability since most waters capable of supporting walleye already have walleye present.

1(c). **Strategy**

- Stock walleye into waters where populations have collapsed, habitat is good and natural reproduction is not occurring or is poor.

Tactics

- Stock fall fingerling, pond-reared walleyes only. Applicable to Shoal Lake, Lake of the Woods (FMZ 8).

This tactic is feasible only on large water bodies like Shoal Lake where the objective is to 'speed up' natural processes and the lake is of high economic and social value. The objective in this case is to establish a large, fishable population able to maintain itself through natural reproduction as quickly as possible. Implementation of this strategy and tactic is dependent upon continuing assessment of fish stocks in the target waters.

1(d). **Strategy**

- Route new roads away from small, hence easily exploited, walleye lakes to keep fishing pressure low.

Tactics

- Use the timber management planning process to route roads away from walleye lakes. Applicable to all District FMZ's.
- Use a similar planning approach for other proposed roads. Applicable to all District FMZ's.
- Expand the use of the Crown Land Camping program if road access to walleye lakes is unavoidable when accessing timber or other resources. Assess on a case-by-case basis. Applicable to all District FMZ's except 10 and 11.
- After timber harvesting, planting and tending operations have been completed, allow road to deteriorate or physically remove it and remove all water crossings impacting on fish spawning habitat. Applicable to all District FMZ's.

Given walleye populations are already overharvested and the number of lakes without road access and good walleye stocks is relatively low, these tactics seem to be feasible and easy to implement. Despite the above strategy and related tactics, residents will continue to have relatively good access to walleye lakes because of the realities of road construction (access is not always avoidable, many lakes were accessed in the past and are alongside permanent thoroughfares) and relatively few restrictions they have with respect to travel and Crown land camping.

Problem/Issue 2.

"THE NUMBER OF LARGE WALLEYE IS BECOMING INCREASINGLY RARE. THE PROBLEM IS MOST ACUTE WHERE EASY ACCESS TO MODERATELY PRODUCTIVE LAKES, KNOWN TO PRODUCE TROPHY WALLEYE, OCCURS."

2(a). **Strategy**

- Reduce harvest of large (trophy) walleye.

Tactics

- Reduce the catch and possession limit of walleye with a total length of 50 cm (19.5 in) or more to one (1). Applicable to all District FMZ's except FMZ 14.
- Introduce a trophy slot-size limit, where no walleye between 50 cm (19.5 in) and 65 cm

(25.5 in) (inclusive) total length may be kept in the daily catch and possession limit. A single walleye with a total length greater than 65 cm may be included in the daily catch and possession limit. Size limits to be assessed and adjusted if necessary. This tactic will be implemented in FMZ 14.

- Implement a 'single, barbless hook' regulation. Applicable to FMZ 14.

Most waters with walleye in Kenora District are capable of producing large fish. Usually, these fish are only vulnerable at certain times of the year in any great quantity (spring and/or fall). Protection of medium-sized to large fish will help ensure production of trophy fish in the future despite increased angling pressure. Protection of medium-sized to large fish is also important with respect to overall fish production, since it is these fish which make up the breeding component of the population.

In FMZ 14, large walleyes are more common, but overall, walleye populations are lower. Fishing pressure on these fish has also been high. Greater protection of medium-sized to large fish will enhance populations, allow for exciting fishing despite heavy angling pressure and hopefully result in even larger fish in the future. This is an experimental technique. Use of barbless hooks is designed to reduce hooking mortality of fish within the slot-size that will have to be released.

Problem/Issue 3.

"THE HARVEST OF NORTHERN PIKE IS WITHIN ALLOWABLE YIELDS EXCEPT ON LAKE OF THE WOODS. HOWEVER, THE AVERAGE SIZE OF PIKE HAS APPARENTLY DECLINED CONSIDERABLY. BIG PIKE ARE MUCH PREFERRED BY ALL ANGLERS."

3(a). **Strategy**

- Reduce harvest of large pike.

  Tactics

- Daily and possession limit of six pike remains but only one fish can be over 70 cm (27.5 in) or greater in total length. Size limit to be assessed and adjusted if necessary. This tactic will apply to all District FMZ's.

- Create new and/or larger fish sanctuaries. This tactic is aligned with the similar tactic to reduce walleye harvests and will be applicable in the same areas (eg. Lake of the Woods, Winnipeg/English River system).

These tactics were chosen because it was felt they are workable and at the same time are similar to those used on walleye to obtain the same general objectives.

Problem/Issue 4.

"ANGLERS GENERALLY HARVEST FEW BLACK BASS, YELLOW PERCH, CRAPPIE AND SMALL NORTHERN PIKE DESPITE LARGE SURPLUSES OF THESE FISH WHILE CONTINUING TO OVERHARVEST WALLEYE AND LARGE PIKE."

4(a). **Strategy**

- Redirect harvest pressure towards underutilized species.

  Tactics

- Promote angler interest in underutilized species through brochures, media releases, etc.

- Meet with tourism groups to encourage them to direct their guides and guests to use these species for shore lunches rather than walleye.

- Retain liberal seasons and limits on these species. A limit reduction for crappies from 40 to 30 has already been initiated to protect localized overharvest in favoured fishing locations (eg Sabaskong Bay in Lake of the Woods). A liberal limit of 30 is proposed for all District FMZ's. Any changes to seasons and/or limits of the other underutilized species will be dependent upon future data. Applicable to all District FMZ's.

- When planning road access, identify waters without walleye but with other sportfish species and provide direct access to these lakes on a case-by-case basis. Applicable to FMZ's 2,3,10,12,13 and 19.

Increased effort spent on public education was viewed in a very positive manner by all user groups and individuals who have been involved in Fisheries Management Planning to date.

Liberal limits were retained so as not to discourage harvest. Although many comments from the public suggested limits be made even more liberal, creels indicated few people take their legal limit now. In some specific instances, limit reductions for crappie were necessary. In addition, a reduction in the limit from 40 to 30 was desireable in U.S.A. waters of Lake of the Woods, so a concurrent reduction in Canadian waters would simplify regulations and management strategies. Black bass season and limit changes could be done if overharvests became apparent or protection of large fish, especially during spawning, becomes an issue.

Increasing access to lakes without walleye (or lake trout) but with sportfish depends upon 1) road

construction from logging taking place in the area, 2) the existence of these lakes and 3) whether such lakes are supporting a remote, tourism-based fishery.

(ii) Environmental Quality

"HUMAN RELATED ACTIVITIES CONTINUALLY HAVE THE POTENTIAL TO DEGRADE FISHERIES HABITAT. IN SOME LOCALIZED CASES, PAST ACTIONS HAVE DEGRADED SOME HABITATS, PARTICULARLY CRITICAL SPAWNING HABITAT."

1(a). **Strategy**

- Protect, enhance and/or rehabilitate fisheries habitat.

Tactics

- Increase public education efforts so the importance of fish habitat becomes more widespread.
- Apply fish habitat guidelines in the timber management planning process and use the same principles when reviewing other development proposals (eg. mining). Applicable to all District FMZ's.
- Direct lake survey programs to areas where resource based activities are planned and ensure inshore habitats and all inlets and outlets are described. Applicable to all District FMZ's except FMZ 8 which is monitored by the Lake of the Woods Assessment Unit.
- Manage water flows where existing dams control water levels to optimize those water levels for spawning walleye. Applicable to all zones where water control structures exist.
- Rehabilitate degraded habitats through both MNR controlled efforts and public involvement (eg. Community Fisheries Involvement Program, Co-operative Fisheries Enhancement Program). Applicable to all District FMZ's.
- Review all plans of subdivisions for cottage lot proposals to ensure critical habitats are not destroyed. Work with Ministry of the Environment to ensure water quality standards are maintained. Applicable to all FMZ's where development occurs.

Increased public awareness of the importance of fish habitat will help ensure problems and conflicts between development and fish production are minimized. This should also help to minimize rehabilitation efforts needed in the future.

Protection, rehabilitation and enhancement of fish habitat is the single most important factor which will ensure the long-term health of the District's fisheries. Other strategies and tactics to manage fisheries will not work if sufficient habitat does not exist. MNR and the public were in agreement over the importance of this issue.

(iii) Conflicts Among Users of the Environment and the Resource

Problem/Issue 1.

"CONFLICTS OVER USE AND ACCESS TO THE RESOURCE ARE INTENSE AND GROWING. CONFLICTS OCCUR BOTH BETWEEN AND AMONG ANGLER USER GROUPS AS WELL AS BETWEEN FISHERIES USER GROUPS AND OTHER RESOURCE USERS (EG. TIMBER HARVEST OPERATORS, COTTAGERS). RECENTLY, CONFLICTS BETWEEN INDIANS (TREATY) AND ALL OTHER FISHERIES USER GROUPS HAS INTENSIFIED."

1(a). **Strategy**

- Reduce the harvest of sportfish by one or some specific user group(s).

Tactics

- Continue with the "willing seller, willing buyer" initiative with respect to government purchase of commercial sportfish quotas. Applicable to all District FMZ's with commercial sportfish quotas.
- Modify (if required) the use of the daily angler validation tag system to reduce the harvest by non-resident, non-contributors while simultaneously increasing the 'resource rent' from this user group. Applicable to FMZ's 2 and 3.
- Restrict camping and/or access by non-residents of Canada and **in some instances Canadian residents** as required when timber access roads are built into areas with high value sportfish fisheries. Applicable to all District FMZ's.
- Resolve 'problem boat cache lakes' by collectively working out a solution with commercial operators. Applicable to all District FMZ's.
- Reduce harvest of sportfish as a result of commercial boat caches by working out agreements between operators, the Ministry of Natural Resources and the Ministry of Tourism and Recreation. Increases in actual numbers of commercial boat caches could occur provided fish harvests associated with boat caches declined. Applicable to all District FMZ's except 36.

Large increases in angler numbers, especially on Lake of the Woods, has occurred largely because of expanding populations in the United States, where most Kenora District anglers originate from. Continuing cottage lot developments from the subdividing of private lands is also expected to continue into the foreseeable future. Most of these cottage lots have been historically purchased by non-residents of Ontario, especially residents of Manitoba.

Since anglers generate greater economic benefit per fish caught than commercial fisherman, allocation of fish to anglers makes economic sense. At the same time, it is unfair to eliminate a persons livelihood without their consent, so the 'willing seller, willing buyer' initiative seems to be the best route to follow. Commercial fishermen, tourist operators and the general public seem to be in agreement over this tactic, although groups and individuals differ to some degree in their assessment of how successful this program is.

Concurrent with the economic argument, it makes little sense to sell off fish resources cheaply. Daily angler validation tags and the Crown Land Camping program increase the value of the fisheries resource to society (they place fees, restrict or prohibit non-residents of Canada who wish to camp or fish in Ontario and do not use tourism facilities). These programs have good public acceptance.

'Problem boat cache lakes' as defined by the Regional Boat Cache Committee only include Salvesen Lake at this time. However, even Salvesen Lake may not have as much a problem from boat cache as it now does because of direct road access.

The Ministry of Natural Resources and the Ministry of Tourism and Recreation will develop models by which changes in the present number of commercial boat caches or fish harvests, associated with present boat caches, are applicable. This could result in lowered harvests but increased economic returns.

1(b). **Strategy**

- Minimize conflicts between fishermen and other resource users.

  Tactics

- Use "Timber Management Guidelines for the Protection of Tourism Values" when access is planned into areas with tourism infrastructures. Applicable to all District FMZ's.
- Review list of DLUG Crown land cottage subdivision lakes. It is suggested lakes for proposed Crown land subdivisions be restricted to FMZ 10 (see also next tactic). Review applicable to all District FMZ's.
- Approach land owners for land title purchase or 'land swap' on high value, remote tourism lakes. Applicable to FMZ 3 (specifically Atikwa Lake). Zone(s) for land swap is preferably FMZ 10 but other FMZ's would be considered.

To ensure high quality fishing opportunities remain in a relatively remote, aesthetically pleasing setting (which residents like and is believed to be a definite plus in marketing angling opportunities to tourists), indirect impacts must be accounted for. General consensus by the tourist industry is that while timber harvest roads are acceptable, their impacts **must** be minimized.

Both residents and the tourist industry appear to be in favour of regulated cottaging areas. Atikwa Lake could be seriously compromised as a high quality tourist lake, insofar as angling is concerned, if all private lands were subdivided into cottage lots.

1(c). **Strategy**

- Keep abreast of Indian Fishing Agreement negotiations.

  Tactics

- Continue to liaise with Indian bands and keep lines of communication open and be willing to negotiate with respect to access to fish resources.

Despite concerns by all parties, no Indian Fishing Agreement yet exists. Adjustments will be made to this plan subsequent to an agreement being reached.

(iv) Public Awareness and Scientific Knowledge

Problem/Issue 1.

"IN GENERAL, MOST PEOPLE HAVE A POOR UNDERSTANDING OF THE SCIENCE AND PRINCIPLES BEHIND FISHERIES MANAGEMENT."

1(a). **Strategy**

- Increase the public education efforts of MNR.

  Tactics

- Increase number, availability and quality of brochures which explain various aspects of fisheries science and management in an interesting yet informative manner.
- Use the media (magazines, newspapers, radio, TV, etc.) to promote fisheries management actions.
- Use MNR personnel trained in public relations/education to interact with school systems and fisheries user groups.

These tactics have received a high level of approval by all. The general consensus by the public is that this tactic is very important for the success of fisheries management planning across the Province.

Problem/Issue 2.

"EXISTING DATA ON MANY DISTRICT FISHERIES IS MINIMAL."

2(a). **Strategy**

- Increase data base on District fisheries.

Tactics

- Conduct angler surveys on an FMZ basis. Applicable to all District FMZ's.
- Direct data collection efforts on fish communities to Assessment Unit type lakes. Applicable to the following lakes: Roger (FMZ 12), Upper Black Sturgeon (FMZ 10), Sand (FMZ 10), Lount (FMZ 11), Dogtooth (FMZ 14), Berry (FMZ 3) and Rowan (FMZ 3).
- Continue with Aquatic Habitat Inventory Program. Applicable to all inland District FMZ's.
- Continue with expansion of data base on Lake of the Woods by Fisheries Assessment Unit (LOWFAU). Information has applicability for improving management actions on Lake of the Woods as well as inland lakes.

Data collection is recognized by all to be a necessary component of fisheries management. Delineation of zones and the affiliated zone management philosophy will provide information on patterns of use in an area that have previously been unavailable.

Data collection will also be tied into other strategies and tactics to evaluate success. This has been the case on Lake of the Woods for several years.

Dependent upon information collected, management actions will be retained, modified or new programs initiated.

Problem/Issue 3.

"SCIENTIFIC KNOWLEDGE ON FISHERIES CAN ALWAYS BE IMPROVED. GOOD MANAGEMENT IS DEPENDENT UPON GOOD SCIENCE AND IN MANY CASES INFORMATION GLEANED FROM ONE STUDY AREA IS NOT ALWAYS APPLICABLE IN ANOTHER AREA."

3(a). **Strategy**

- Encourage research on District sportfish resources by university involvement. Applicable to all District FMZ's.
- Use the LOWFAU to collect management information and do research on Lake of the Woods.
- Support research initiatives from other government agencies. Applicable to all District FMZ's.

Both managers and the public recognize the uniqueness of any given area. While research on any given number of topics may have to be restricted to areas outside this District, encouragement of research activities is desireable. As well as data collection, the LOWFAU has done some research in recent years.

3.2.4 Lake Trout

Lake trout have been distinguished for species specific management as per provincial planning guidelines.

Anglers have identified lake trout as a highly prized fish species. Because lake trout are usually associated with pristine, aesthetically pleasing water, demand for lake trout lakes for purposes other than just fishing is also high.

3.2.4.1 Management Objective

To maximize high quality (catch per unit effort and trophy fish) recreational angling opportunities while maintaining self-sustaining populations.

3.2.4.2 Targets

The targets associated with lake trout differ little from those of sportfish with the exception of the actual harvest numbers. Generally, though, this plan when dealing with lake trout attempts to reduce harvests by a much larger magnitude than for sportfish and also focuses more on enhancement of trophy fisheries in specific lakes or areas.

As with sportfish, angler numbers are expected to increase because of more private land cottage developments (mostly on Lake of the Woods) and increases in the average levels of accommodation at existing tourism facilities.

The specific lake trout targets are:

1. *To manage harvest at a level below the allowable yield, which for Kenora District is 51,400 kg.*
2. *To manage for expected increases in angler-days (opportunities), from the present 143,782 angler-days to a* **maximum** *projection of 177,801 angler-days.*

3. *To manage for current and projected harvests of lake trout by Indians for subsistence use in the absence of a Indian fishing agreement (current harvest, 3,284 kg/yr; projected harvest, 3,834 kg/yr).*

4. *To achieve harvest levels by emphasizing* **catching** *of lake trout and de-emphasizing* **killing** *of lake trout.*

5. *To manage specifically for trophy (large) fish in some waters and/or FMZ's by further reducing the kill, while continuing to maintain opportunities.*

3.2.4.3 Problems and Issues — Strategies and Tactics

(i) Availability of Fish and Fishing Opportunities

Problem/Issue 1.

"THE CURRENT AND PROJECTED ANGLER HARVESTS ARE TOO HIGH. CONTINUATION OF CURRENT PRACTICES SERIOUSLY RISKS DEPRECIATING THE RESOURCE."

1(a). **Strategy**

- Reduce harvest of lake trout to below the allowable yield but maximize angler opportunities to catch fish.

Tactics

- Reduce the daily catch and possession limit to 2 trout. Applicable to all District FMZ's except FMZ 8 (Lake of the Woods) and selected lakes in FMZ 3.
- Implement a 'single, barbless hook' regulation in FMZ 14 and selected lakes in FMZ 3 and in the lake trout waters of Lake of the Woods (FMZ 8) for all or part of the year.
- Review boat cache applications on a case-by-case basis. Applicable to all lake trout waters.
- Review all requests for tourist accommodation expansion on lake trout lakes on a case-by-case basis.
- Investigate the potential for introducing a season limit for lake trout. Applicable initially to non-residents of Ontario.

Reduction of the harvest of lake trout is a formidable task. They are a popular fish among anglers and are important to the tourist industry as well. However, present and projected harvests are well above allowable yields and substantial reductions are necessary.

Resident public opinion generated from the Summary Document and the Draft Plan indicated reductions in the limit from three to two fish would be acceptable. Limits of lake trout are common during the spring early ice-out fishery and in early winter, so reduction of the limit will reduce harvest.

Gear restrictions have not been suggested as a broad-based technique to reduce harvests. However, gear restrictions (ie. the single, barbless hook) are applicable when managing for trophy lake trout fisheries (see Problem/Issue 3 in this section). The same restriction in also applicable in FMZ 14, where lake trout, a trophy walleye fishery and high angler numbers are concurrently being managed.

Season changes have not initially been suggested (except in Clearwater Bay, Echo Bay and Cul de Sac — see Problem/Issue 3 in this section).

If harvests are not reduced to below allowable yields by limit reductions, season adjustments will be considered. Reduced seasons will result in fewer fishing opportunities.

Expansions in the tourist accommodation business may be possible and increased accommodation levels acceptable if lake trout harvests in the affected lake(s) remain below allowable yields.

Season limits provide a very good tool for harvest control but immediate implementation is premature. Ultimately, control over the number of fish anglers (especially non-resident of Ontario anglers) catch may be necessary. This would be done by using the concept of a tag for each fish kept.

1(b). **Strategy**

- Do not as a general rule provide direct road access to lakes with lake trout populations.

Tactics

- Use the timber management planning process to route roads away from lake trout lakes. Applicable to all District FMZ's.
- Use a similar planning process for other proposed roads (eg. mineral exploration and development roads). Applicable to all District FMZ's.
- After timber harvesting, planting and tending operations have been completed, allow roads (generally tertiary but in some instances secondary as well) to deteriorate or physically remove them. Applicable to all District FMZ's.
- Regulate some roads so they are not open to public travel (including both residents and non-residents). Applicable in FMZ's 3, 12 and 14.

The above strategies and tactics are, with the exception of the last tactic, similar to those

proposed for unaccessed walleye lakes and for similar reasons. Restricting a few select roads to no public travel is believed to be the only method available whereby high value lake trout fisheries in remote settings can retain their present character. Both resident and non-residents will benefit from this mix of road related tactics.

1(c). **Strategy**

- Stock lake trout into waters where populations have disappeared but habitat is suitable.

Tactics

- Stock suitable stocks of lake trout only where there is a reasonable chance of establishing self-perpetuating populations. Applicable to all District FMZ's.

At the present time there are few, if any, lakes in the Kenora District where this tactic is applicable. Only Dogtooth Lake (FMZ 14) and Goshawk Lake (FMZ 11) are currently identified.

Problem/Issue 2.

"LAKE TROUT ARE THE MOST ABUNDANT AND POPULAR COLD-WATER FISH IN THE KENORA DISTRICT. OTHER COLD-WATER SPECIES ARE EITHER UNPOPULAR OR EXIST BECAUSE THEY ARE PUT-GROW-AND-TAKE FISHERIES."

2(a). **Strategy**

- Re-direct anglers to alternate cold and warm water underutilized species.

Tactics

- similar to those suggested for walleye; eg.
  - promote angler interest in underutilized species (for example, promote the eating qualities of burbot) via brochures, media releases, etc.,
  - encourage road access to lakes with underutilized species (eg. during the timber management process)
  - meet with tourist groups to encourage them and their guests to fish for and eat alternate species
- Promote whitefish angling techniques since most anglers don't know how to catch whitefish.
- Assess use of present put-grow-and-take fisheries (eg. speckled trout and splake) and expand these fisheries dependent upon the demand and availability of suitable waters. Applicable to FMZ's 3,10,13 and 14.

This strategy and the first tactic are similar to those suggested for sportfish with similar reasoning.

Whitefish, judging by the popularity of dip net licenses issued in the fall, are attractive to fishermen. If anglers were more adept at catching whitefish it's quite possible a significant fishery could be established in the District.

Splake have yet to become popular (so far they have been stocked only in Dogtooth Lake) but speckled trout seem to be quite popular. Until rising costs prohibited the planting of rainbow trout, they too were a popular put-grow-and-take fishery.

Potential for continued stocking or increased stocking of splake and speckled trout will be assessed.

Problem/Issue 3.

"CERTAIN BODIES OF WATER HAVE UNIQUE CAPABILITIES TO CONSISTENTLY GROW LARGE TROUT BUT QUALITY CANNOT BE MAINTAINED WITHOUT SPECIAL MANAGEMENT."

3(a). **Strategy**

- Manage certain bodies of water in specified zones for trophy lake trout.

Tactics

- Reduce the daily catch to one (1), possession limit to two (2). Applicable to FMZ 8 (Whitefish Bay on Lake of the Woods) and selected waters in FMZ 3 (Dryberry Lake and Rowan Lake).
- Introduce a maximum size limit whereby only one (1) fish in the possession limit can be equal to or greater than 65 cm (25.5 in) in total length. Applicable to the same waters identified in the above tactic.
- Implement gear restrictions on the above lakes. Specifically, artificial lures only and/or single, barbless hooks. Applicable from January 1 to the 3rd Saturday in May.
- Close the winter lake trout season **immediately** (effective January 1, 1988 until the third Saturday in May. Closure dates in 1989 and beyond to be determined) in Clearwater Bay, Echo Bay and Cul de Sac (FMZ 8) as an **interim** measure to protect these lake trout stocks at a time when they are particularly vulnerable to harvest pressures.
- Establish a committee of resource managers (Ministry of Natural Resources, Ministry of the Environment, Ministry of Tourism and Recreation) and local fisheries interest groups to formulate a management plan for the

Clearwater Bay, Echo Bay and Cul de Sac lake trout stocks. Committee to be established in the spring of 1988 with a report, including action recommendations, to be completed by October, 1988.

Lake of the Woods has probably been the most notable producer of big lake trout in the Kenora District.

Extremely heavy harvest pressure in Clearwater Bay, Echo Bay and Cul de Sac (because of the knowledge these waters produce big trout coupled with easy access) have already resulted in greatly reduced trout stocks. **Closure of the winter season is acknowledged to be a drastic measure but given the stress these stocks are facing it is the best short-term option. Winter closure effective from Jan. 1, 1988, until the season opens on the third Saturday in May.**

Oxygen depletion in the lower depths (in Clearwater Bay) in late summer is now occurring as is loss of lake trout spawning habitat because of algal buildup. This will also have to be addressed if the lake trout fishery is to thrive (see the next Problem/Issue).

Whitefish Bay is considerably larger in size than the Clearwater Bay area. It is not as easily accessed and has not experienced much habitat loss. Closure of the winter fishing season is not recommended.

Dryberry and Rowan lakes are large, relatively inaccessible lakes with little development that have a high potential for trophy fish management in an extremely pleasing setting.

Whitefish Bay, Dryberry Lake and Rowan Lakes will, though, have a catch per angler per day of one (1) with a possession limit of two (2). Only one fish in the possession limit will be allowed to be greater than 65 cm (25.5 in) in total length. This size limit is designed to keep the harvest of large fish low yet allow the angler to have a fish to eat.

Barbless hook restrictions will enhance the survival of released fish. Use of artificial lures will also facilitate release of fish (compared to spoons and plugs, bait is often swallowed deeply). Single, barbless hook restrictions to apply from January 1 to the 3rd Saturday in May.

(ii) Environmental Quality

Problem/Issue 1.

"LAKE TROUT ARE VERY SENSITIVE TO CHANGES IN HABITAT, PARTICULARLY PERTAINING TO WATER QUALITY AND SPAWNING SHOALS. IN SOME LAKES HABITAT HAS BEEN NEGATIVELY IMPACTED UPON AND IS IN NEED OF REHABILITATION."

1(a). **Strategy**

- Protect, enhance and/or rehabilitate lake trout habitat.

Tactics

- Apply fish habitat guidelines in the timber management planning process and use the same principles when reviewing other development proposals (eg. mining). Applicable to all District FMZ's.
- Maintain lake trout lakes as highest priority with respect to the Aquatic Habitat Inventory to ensure inshore habitats and all inlets and outlets are described. Applicable to all District FMZ's except FMZ 8.
- Monitor habitat, including shoreline habitat, in FMZ 8 to establish long-term trends.
- Manage water flows on lakes with dams to keep large winter water drawdowns from occurring. Applicable to all District FMZ's.
- Rehabilitate degraded spawning habitats and/or create new ones through both MNR controlled efforts and public involvement (eg. CFIP). Applicable to all District FMZ's.
- Request Ontario Ministry of the Environment input into monitoring private septic systems on a regular basis on those lake trout waters where recreational cottage/home development is great. Enforce repair of any faulty systems. Applicable to FMZ 8, specifically the Clearwater Bay and Echo Bay areas.
- Apply a Section 13 order under the Public Lands Act (R.S.O. 1980) to Clearwater Bay, Echo Bay Cul de Sac to ensure further developments are tightly controlled so as not to impact negatively on lake trout habitat.

The above strategy and related tactics are somewhat similar to those suggested for sportfish. However, they are slightly more restrictive and reflect the greater sensitivity lake trout have to disturbance as compared to sportfish in general. In Kenora District, lake trout habitat problems are not widespread. By applying stringent development guidelines, it is hoped this situation will persist.

(iii) Conflicts Among Users of the Environment and the Resource

Problem/Issue 1.

"CONFLICTS OVER USE AND ACCESS TO THE RESOURCE ARE GREATEST AMONG: RESIDENT OF ONTARIO AND NON-RESIDENT OF ONTARIO ANGLERS; ANGLERS AND COMMERCIAL FISHERMEN;

TIMBER HARVEST OPERATORS AND COTTAGE LOT DEVELOPERS (WHO ARE IN CONFLICT WITH LAKE TROUT AND LAKE TROUT MANAGEMENT PRACTICES); AND THE INDIAN PEOPLE AND ALL OTHER RESOURCE USERS."

1(a). **Strategy**

- Reduce the harvest of lake trout by the user group(s) that contributes the least to the social and/or economic well-being of Northwestern Ontario.

Tactics

- Require all non-residents of Canada who angle for lake trout to do so through an Ontario base of operations (an Ontario base of operations includes recognized tourist operations, personal property and provincial parks with regulated campgrounds). Non-residents of Canada not angling through an Ontario base of operations can angle for lake trout if they are in accompaniment of a resident of Ontario who can legally fish lake trout (eg. licenced adult angler, senior citizen, persons under the age of 18). **However, only the Ontario resident will have a valid daily and possession limit.** Applicable to all District FMZ's.
- Purchase the commercial lake trout food fish quota on all commercial food fish licenses. Applicable to all District commercial food fishermen.

Lake trout, being a highly prized, valuable and sensitive fish, will be managed to maximize economic and social returns from harvests. Requiring non-residents of Canada who desire to angle for lake trout to do so through an Ontario base of operations, or with a resident of Ontario, should accomplish these objectives.

Commercial fishermen should not be encouraged to harvest lake trout. Purchase of quotas by the government will reduce commercial catches while compensating fishermen for the loss of revenue.

1(b). **Strategy**

- Minimize conflicts between fishermen and other resource users.

Tactics

- Use "Timber Management Guidelines for the Protection of Tourism Values" when access is planned into areas with tourism infrastructures. Applicable to all District FMZ's.
- Continue to prohibit development of Crown land cottage subdivisions on lakes with lake trout. As with Sportfish, it is recommended any future proposals for Crown land subdivisions be in FMZ 10, **as long as the lakes do not have lake trout.**
- The 'land swap' suggested for Atikwa Lake (or land title purchase) is again applicable here, as Atikwa Lake is a lake trout lake.

This strategy and associated tactics are essentially the same as those suggested for sportfish under the same problem/issue.

The aesthetically pleasing nature of remote lake trout fishing opportunities is designed to once again benefit both residents and non-residents.

1(c). **Strategy**

- Keep abreast of Indian Fishing Agreement negotiations.

Tactics

- Continue to liaise with Indian bands and keep lines of communication open and be willing to negotiate with respect to access to fish resources.

The above is identical to the position for sportfish.

(iv) Public Awareness and Scientific Knowledge

Problem/Issue 1.

"IN GENERAL, MOST PEOPLE HAVE A POOR UNDERSTANDING OF THE SCIENCE AND PRINCIPLES BEHIND FISHERIES MANAGEMENT."

The first problem/issue is identical to that identified under sportfish, eg. public information. Increased efforts at public education are required for **all** aspects of fisheries management, and indeed is the cornerstone of management planning efforts.

Problem/Issue 2.

"SMELT, A FISH POTENTIALLY HARMFUL TO NATURAL FISHERIES, (ESPECIALLY THOSE IN COLD-WATER LAKES), ARE ALMOST ALWAYS INADVERTENTLY INTRODUCED BY PEOPLE CLEANING SMELT OR USING FRESHLY CAUGHT SMELT FOR BAIT."

2(a). **Strategy**

- Prevent people from spreading smelt to waters where smelt presently do not exist.

Tactics

- Control the use and harvest of smelt in North Western Ontario.
- Have a public education campaign each spring to inform and remind people how **not** to introduce smelt to new waters.

A special concern with respect to public awareness and lake trout (but other fish species as well) is the introduction of smelt to Kenora District lakes. Smelt are usually introduced into lake trout lakes inadvertently by people cleaning smelt or using freshly caught smelt from another water body for bait. The eggs can be fertilized when mixed together with milt in the container used to carry smelt caught during the spring spawning run. Fertilized eggs can live for several days out of water and can thus be easily introduced into suitable waters.

Preventative measures, coupled with a caring and knowledgeable public, can prevent these unwanted introductions. Live smelt are presently illegal as baitfish. Controlling the harvest of smelt from Northwestern Ontario will reduce harvest opportunities very little (as yet the presence of smelt is not widespread) but will reduce the possibility of inadvertent introductions (people will still be able to go east towards Thunder Bay to harvest smelt).

Smelt can compete negatively with some native fish stocks, especially with cisco and whitefish. They are also believed to impart an undesirable, oily flavour to lake trout (which feed heavily on smelt). Finally, angling quality for lake trout can deteriorate when smelt establish themselves in a lake. This is because smelt often become very abundant and trout become fat, well fed and less susceptible to angling methods.

Problem/Issue 3.

"EXISTING DATA ON MANY DISTRICT FISHERIES IS MINIMAL."

This problem/issue is also the same as one identified for sportfish, and again, strategies and tactics are identical. In the past, there has been more emphasis on data gathering on lake trout fisheries because of their greater susceptibility to exploitation and other forms of stress. This trend is likely to continue, but does not mean warmwater fisheries will not be monitored and assessed.

Problem/Issue 4.

"SCIENTIFIC KNOWLEDGE ON FISHERIES CAN ALWAYS BE IMPROVED. GOOD MANAGEMENT IS DEPENDENT UPON GOOD SCIENCE AND IN MANY CASES INFORMATION GLEANED FROM ONE STUDY AREA IS NOT APPLICABLE IN ANOTHER AREA."

Once again, this problem/issue and the associated strategy and tactics are identical as those for sportfish. As with Problem/Issue 2 (above), lake trout studies have had and will have high importance in Kenora District.

3.2.5 Muskellunge

Like lake trout, muskellunge have been distinguished for species specific management. This reflects the importance of the world-renowned muskellunge fishery of Kenora District.

Muskellunge, or musky, are highly prized by anglers because of their rarity, fighting qualities and the fact they can grow to a great size. However, muskellunge do not seem to be able to thrive under high levels of exploitation and knowledge of basic muskellunge biology is poor.

3.2.5.1 Management Objective

To optimize quality recreational angling opportunities for this species while maintaining naturally reproducing populations.

3.2.5.2 Targets

The targets for muskellunge differ substantially from those of sportfish and lake trout. This is because no allowable yield estimates are readily available and even angler pressure estimates are virtually non-existent. The specific targets given below are in reality only refinements of the management objective statement given above.

1. *To manage the harvest at a level which minimizes the kill.*
2. *To manage, at least initially, to angler demand for opportunities.*
3. *To manage largely for trophy fish.*

The value and importance of muskellunge is already reflected in new fishery regulations proposed for 1987. These include reduction in the daily catch from two fish to one and increases in the minimum size limit (from 28 inches across the District to 40 inches on Lake of the Woods and 34 inches in all other waters). It is recognized some harvest of muskellunge by the Indian people for food purposes will occur.

3.2.5.3 Problems and Issues — Strategies and Tactics

(i) Availability of Fish and Fishing Opportunities

Problem/Issue 1.

"MUSKELLUNGE ARE SELDOM ABUNDANT AND ARE SENSITIVE TO EXPLOITATION."

1(a). **Strategy**

- Manage musky as a trophy species in all zones in which they occur.

Tactics

- Assess new regulatory changes (eg. increased minimum size limits, daily limit of one, possession limit of two). Applicable to all District FMZ's.

Managing musky as a trophy species is logical given its rarity and the high value anglers place on the species. Ardent musky anglers release most of their catch, so a reduced limit will have little effect on them. However, it will reduce harvest by non-trophy fishermen.

Dependent upon what information is gathered from muskellunge and muskellunge anglers during the course of this plan, it may become desireable to implement a seasonal limit on muskellunge. As with lake trout, it is felt implementation of season limits are premature at this time.

(ii) Environmental Quality

Problem/Issue 1.

"MUSKELLUNGE ARE VERY SENSITIVE TO CHANGES IN THEIR HABITAT".

1(a). **Strategy**

- Protect musky habitat.

Tactics

- Treat musky lakes like lake trout lakes when fisheries habitat guidelines are being used to protect fisheries from impacts generated from other resource users.

Although muskellunge habitat requirements are poorly understood, treating musky lakes like lake trout lakes should provide for at least adequate protection of musky habitat.

(iii) Conflicts Among Users of the Environment and the Resource

Problem/Issue 1.

"AS WITH SPORTFISH AND LAKE TROUT, CONFLICTS OVER USE AND ACCESS TO MUSKELLUNGE, MUSKY LAKES AND MUSKY LAKE SHORELINES ARE HIGH AND INCREASING. SIMILARLY, CONFLICTS BETWEEN INDIANS AND NON-INDIANS FOR FISH, INCLUDING MUSKELLUNGE, ARE INTENSIFYING."

1(a). **Strategy**

- Reduce the harvest and access to muskellunge by one or some specific user group.

Tactics

- Require all non-residents of Canada who angle for muskellunge to do so through an Ontario base of operations or to fish with a resident of Ontario who can legally angle and possess fish. Applicable to all District FMZ's.

Given the trophy status of muskellunge and its high angler appeal, it makes little sense to allow low socio-economic returns from this valuable resource (for more detail, see Lake Trout; **(iii) Conflicts Among Users of the Environment and the Resource)**

1(b). **Strategy**

- Minimize conflicts between fishermen and other resource users.

Tactics

- Use "Timber Management Guidelines for the Protection of Tourism Values" when access is planned into areas with tourism infrastructures. Applicable to all District FMZ's.
- Prohibit development of Crown land cottage subdivisions on lakes with muskellunge. Crown land cottage subdivision proposals are recommended for FMZ 10 **as long as the lake does not have muskellunge** (or lake trout).

This strategy and associated tactics are essentially the same as those suggested for sportfish and lake trout.

1(c). **Strategy**

- Keep abreast of Indian Fishing Agreement negotiations.

Tactics

- Continue to liaise with Indian bands and keep lines of communication open and be willing to negotiate with respect to access to fish resources.

The above is identical to the position taken for both sportfish and lake trout.

Problem/Issue 2.

"HYDRO-ELECTRIC DAMS HAVE CHANGED FISHERIES HABITAT CONSIDERABLY IN THE ENGLISH AND WINNIPEG RIVER SYSTEMS. SOME RESIDENTS CLAIM MUSKELLUNGE FISHERIES IN SOME STRETCHES OF

THESE RIVERS, IN PARTICULAR THE ENGLISH RIVER, WERE GOOD PRIOR TO DAMMING. SINCE DAMMING, THE RIVER HABITATS HAVE CHANGED CONSIDERABLY AND MUSKELLUNGE HAVE LARGELY DISAPPEARED. RECENTLY, SOME STRETCHES OF WATER SEEM TO RESEMBLE PRE-DAMMING CONDITIONS AND MAY HAVE POTENTIAL FOR MUSKELLUNGE RE-COLONIZATION."

2(a). **Strategy**

- Assess suitability of muskellunge habitat in the English River, in particular the Umfreville Lake area.

Tactic

- If suitable muskellunge habitat exists, Umfreville Lake or other suitable stretches of river (FMZ 11) should be identified as a candidate(s) for stocking with muskellunge fingerlings.

This particular strategy and tactic should be tied in with the Aquatic Habitat Inventory Program dealing with large river systems.

(iv) Public Awareness and Scientific Knowledge

Problem/Issue 1.

"IN GENERAL, MOST PEOPLE HAVE A POOR UNDERSTANDING OF THE SCIENCE AND PRINCIPLES BEHIND FISHERIES MANAGEMENT."

This problem/issue has previously been identified for both sportfish and lake trout. It once again demonstrates the need for greater efforts by the MNR and the need for all user groups to get more involved with fisheries management. Public information concerning such management practices as catch-and-release, for example, are particularly important with respect to musky. This is because catch-and-release will be a major thrust in the management strategy and musky seem to be particularly sensitive to stress associated with handling.

Problem/Issue 2.

"NORTHERN PIKE, WHEN PRESENT IN THE SAME AQUATIC ENVIRONMENT AS MUSKELLUNGE, TEND TO 'OUT-COMPETE' MUSKY. MUSKY TEND TO DO 'BEST' WHEN NOT IN THE SAME LAKE OR RIVER AS PIKE. PIKE INTRODUCTIONS THEREFORE IMPACT NEGATIVELY ON MUSKY POPULATIONS."

2(a). **Strategy**

- Reduce risk of northern pike introductions.

Tactics

This problem/issue is a public education problem, since almost all unwanted pike introductions are the result of unauthorized introductions by anglers. This is one of the most serious 'education' problems and was thus singled out for the sake of emphasis.

Problem/Issue 3.

"SOME SMALL MUSKY LAKES IN KENORA DISTRICT ARE CHARACTERIZED BY RELATIVELY LARGE MUSKY POPULATIONS WHERE THE FISH SELDOM REACH MINIMUM SIZE, EVEN WHEN THE MINIMUM SIZE WAS 28 INCHES".

3(a). **Strategy**

- Develop management techniques which permits modest harvest of edible non-trophy size fish.

Tactics

- Assess age and growth characteristics with the aim of establishing an experimental harvest strategy. Applicable to FMZ 10.
- Use some of these small musky to try and re-establish musky populations in areas where they have disappeared but habitat appears suitable. Applicable possibly to FMZ 11 (Umfreville Lake).

These tactics are long-term goals. Research done elsewhere may prove to be very useful when applied to this situation. Other areas, either in Kenora District or elsewhere, may be able to use adult musky transfers as well.

Problem/Issue 4.

"SOME LARGE MUSKY WATERS IN KENORA DISTRICT OCCASIONALLY PRODUCE VERY LARGE MUSKELLUNGE. LITTLE DATA EXISTS ON THEIR GROWTH RATES SO IT IS QUITE POSSIBLE THE MINIMUM SIZE LIMIT OF 102 CM (40 INCHES), LIKE ON LAKE OF THE WOODS, IS MORE APPLICABLE THAN THE PROPOSED SIZE LIMIT OF 86 CM (34 INCHES)."

4(a). **Strategy**

- Improve information base on growth rates and age at first maturity.

Tactics

- Encourage and support research. Applicable to all District FMZ's with muskellunge.
- Liaise with tourist industry and local taxidermists to improve data base on harvested musky. Applicable to FMZ's 2,3,8,10,11,12.

Improvements in understanding biology of muskellunge in District lakes will ensure appropriate size limits and harvest tactics are being used.

3.2.6 Commercial Fish — Bait

'Bait fish' means any member of the minnow family (except carp and goldfish), the mudminnow family, the sucker family, the stickleback family, the trout-perch family, the sculpin family, the genus **Coregonus** (ciscos) and the darter family Etheostomatinae.

3.2.6.1 Management Objective

To provide for the harvest of baitfish for use by the sportfishery recognizing the overall social and economic benefits generated primarily through the maintenance of a viable baitfish industry.

3.2.6.2 Targets

To manage the resource so there are enough baitfish to meet the demand by anglers. The **maximum** scenario suggests 265,000 dozen baitfish will be required by the year 2000 by anglers fishing in the Kenora District.

3.2.6.3 Problems and Issues — Strategies and Tactics

(i) Availability of Fish and Fishing Opportunities

Problem/Issue 1.

"DURING SUMMER MONTHS MORTALITY OF ALREADY CAPTURED BAITFISH BY BAITFISH DEALERS CAN BE SUBSTANTIAL."

1(a). **Strategy**

- Continue to improve baitfish holding facilities.

Tactics

- Continue to provide information to all District dealers.
- Liaise with industry with respect to improvements in technology.
- Check facilities prior to issuing new licence.
- Cancel licenses of dealers who fail to demonstrate their ability to properly handle baitfish (a last resort to be used when gross negligence is apparent).

This problem has been reduced substantially in recent years, and in reality is only a minor problem now.

1(b). **Strategy**

- Encourage use of rearing and holding ponds.

Tactics

- Continue to liaise with the baitfish industry and encourage technology transfer. Applicable to all District FMZ's.

While some fishermen are now using ponds, use of them is low and management of them in northern areas is poorly understood.

Problem/Issue 2.

"SUMMER KILL AND/OR WINTER KILL CAN REDUCE BAITFISH YIELDS FROM A LAKE TO VIRTUALLY ZERO."

This problem/issue is difficult to avoid in areas where access to electrical power does not exist (if it did oxygen could be circulated into the lake via air pumps). One solution to this problem is to restock the lake with compatible species after more suitable conditions have returned.

(ii) Environmental Quality

Problem/Issue 1.

"LOGGING OR OTHER RESOURCE ACTIVITIES CAN IMPACT NEGATIVELY UPON BAITFISH LAKES AND CAUSE BOTH SHORT-TERM AND LONG-TERM REDUCTIONS IN PRODUCTIVITY."

1(a). **Strategy**

- Provide protection to baitfish lakes during the planning stages of any developments with potential to impact upon such lakes.

Tactics

- Ensure MNR planning teams are aware of baitfish lakes. Applicable to all District FMZ's.

This problem/issue is essentially a communication problem that can best be overcome by ensuring the resource users (baitfishermen) and government managers (eg MNR, any other government Ministry or agency involved) work together.

(iii) Conflicts Among Users of the Environment and the Resource

Problem/Issue 1.

"THE EVER-INCREASING NUMBER OF FOREST ACCESS ROADS ALLOWS GREATER USE OF BAIT-FISH LAKES BY PERSONS NOT ASSOCIATED WITH THE BAIT-FISH INDUSTRY. THESE LEGITIMATE USERS (RESIDENTS OF ONTARIO) CAN REDUCE PRODUCTION BY REMOVING A SUBSTANTIAL

PORTION OF THE ALLOWABLE YIELD AND BY INTRODUCING INCOMPATIBLE FISH SPECIES INTO THESE LAKES."

1(a). **Strategy**

- Ensure adequate protection to baitfish lakes when planning new forest access roads.

Tactics

- Ensure MNR planning teams are aware of baitfish lakes. Applicable to all District FMZ's.
- Increase public awareness over the dangers of species introduction. Applicable to all District FMZ's.

The above strategy and the first tactic are identical to the previous problem and once again demonstrates the need for communication. The industry has responsibility in keeping MNR informed as to which lakes are baitfish lakes. Public awareness will also be discussed later as it has far reaching consequences.

Problem/Issue 2.

"THE DEMAND FOR BAITFISH LICENSES EXCEEDS THE AVAILABILITY OF BLOCKS."

2(a). **Strategy**

- Maintain current block licencing system.

Tactics

- Continue to allow new entrants into the system only when blocks are available (transfers or sale of licenses are controlled by the owner. Status quo). Applicable to all District FMZ's.

While the above problem/issue is real, the industry as a whole is very supportive of the present system which seems to be working well.

Problem/Issue 3.

"IN SOME SITUATIONS THE BAITFISH INDUSTRY IS UNABLE TO SUPPLY TOURIST OPERATORS IN ISOLATED SETTINGS. IN THESE INSTANCES, SOME TOURIST OPERATORS BELIEVE THEY SHOULD HAVE LICENSES TO CATCH AND SELL BAITFISH TO THEIR GUESTS."

3(a). **Strategy**

- Ensure tourist operators are supplied with baitfish to meet their needs.

Tactics

- Issue licenses to tourist outfitters who can show documentation that baitfish dealers cannot reasonably supply their needs. Licence valid only for tourist outfitter guests. Status quo. Applicable to all District FMZ's.
- Facilitate meetings between tourist operators and baitfishermen. Applicable to all District FMZ's.
- As a last resort,assume the role of a third party arbitrator to resolve conflicts. Applicable to all District FMZ's.

In most cases, the present baitfish system is working reasonably well. It may be necessary for the MNR to resolve certain disputes when two or more parties are unable to resolve their differences.

(iv) Public Awareness and Scientific Knowledge

Problem/Issue 1.

"IN GENERAL, MOST PEOPLE HAVE A POOR UNDERSTANDING OF THE SCIENCE AND PRINCIPLES BEHIND FISHERIES MANAGEMENT."

This same problem/issue has been addressed before and is equally applicable to baitfish as it is to other fisheries categories mentioned in this plan.

Problem/Issue 2.

"INFORMATION ON MANY ASPECTS OF BAITFISH AND BAITFISH LAKE BIOLOGY/ECOLOGY IS LACKING. THESE INCLUDE THE EFFECTS ON BAITFISH OF SHORELINE COVER, WATER LEVEL FLUCTUATIONS, WILD RICE MANAGEMENT AND EVEN HARVEST LEVELS."

2(a). **Strategy**

- Improve data base and scientific knowledge of baitfish and baitfish lakes to assist industry and MNR in management of the resource.

Tactics

- Establish a forum to:
  - improve communications between MNR and the baitfish industry
  - ensure accuracy of baitfish returns
  - exchange information and knowledge on the characteristics of baitfish lakes
  - deal with any other topic that may arise

  Applicable to all District FMZ's.
- Promote and support northern research on baitfish and baitfish lakes. Applicable to all District FMZ's.
- Use Aquatic Habitat Inventory Program to identify 'good' baitfish lakes to the industry. Applicable to all District FMZ's.

Improvements in the running of the baitfish industry and any other industry for that matter are laudable goals and are important ingredients to recognize in a District Fisheries Management Plan.

3.2.7 Commercial Fish — Food

Commercial food fish include such species as lake whitefish, walleye, sauger, northern pike, lake trout and numerous other species of fish seldom sought intentionally by anglers using rod and reel (eg. white suckers, ling, tullibee or ciscos, etc.).

3.2.7.1 Management Objective

To maintain a viable industry by encouraging the harvest of commercial fish under the quota system **where it is biologically, economically and socially acceptable.**

3.2.7.2 Targets

Commercial food fish targets are closely tied to those of sportfish. In Kenora District, the general trend will be to reduce catches of sportfish species by the commercial food fishery by quota reductions of walleye, northern pike and also lake trout. At the same time, it is the intent of this plan to ensure a viable commercial food fish fishery is maintained where possible. Harvests of certain fish species at certain times of the year may be closely aligned with sportfish targets.

In the following sub-sections, targets are given for specific species and/or groups of fish.

1. *Sturgeon: To maintain the present harvest of 4,545 kg/yr in Lake of the Woods and zero in inland waters.*
2. *Lake Whitefish: To maintain the present harvest of 12,036 kg/yr in Lake of the Woods. To* **reduce** *the inland harvest of 165,301 kg/yr to levels more closely approximating allowable yields. Actual reductions to be based on case -by-case studies of individual fisheries.*
3. *Sportfish: To reduce the 1985 quotas/harvest of 286,382 kg/yr on Lake of the Woods to 75,000 kg/yr (Harvest target does not include Shoal Lake. Commercial sportfish harvest to be finalized upon recovery of the walleye fishery there). On inland lakes reduce the present quotas/harvest of 35,089 kg/yr to 12,500 kg/yr.*
4. *Lake Trout: To reduce the quota on Lake of the Woods* **and** *inland lakes to zero (0 kg/yr).*
5. *Other Species: To manage for continued harvests of other fish (generally referred to as 'coarse' or 'rough' fish) dependent upon availability and marketability.*

3.2.7.3 Problems and Issues — Strategies and Tactics

(i) Availability of Fish and Fishing Opportunities

Problem/Issue 1.

"IN LAKE OF THE WOODS, STURGEON AND WHITEFISH STOCKS ARE MUCH REDUCED FROM HISTORICAL LEVELS."

1(a). **Strategy**

- Maintain current sturgeon and whitefish quotas on Lake of the Woods (FMZ 8).

Tactics

- Continue studies on whitefish and initiate sturgeon studies.
- Locate spawning areas and determine feasibility of habitat restoration, if necessary.

Because of the poor understanding of whitefish and sturgeon stocks on Lake of the Woods, it seems prudent to continue with the present catch quotas as a balance appears to now exist.

Problem/Issue 2.

"ON INLAND LAKES, CURRENT WHITEFISH HARVESTS EXCEED ALLOWABLE YIELD ESTIMATES."

2(a). **Strategy**

- Adjust quotas as required.

Tactics

- Monitor catches and collect biological information. Applicable to all District FMZ's.

Better information will benefit both the resource and the resource users. Some stocks appear to be holding up to high harvest pressures although others seem to be faring poorly.

Problem/Issue 3.

"WALLEYE HARVESTS (AND IN SOME INSTANCES NORTHERN PIKE HARVESTS) BY ALL USER GROUPS COMBINED EXCEED ALLOWABLE YIELD ESTIMATES."

3(a). **Strategy**

- Reduce harvest of walleye and northern pike to below their respective allowable yields.

Tactics

- Reduce commercial catches of both species by continuing with the "willing seller, willing buyer" initiative. Applicable to all District FMZ's with commercial fish quotas.

Other user groups are also being asked for a reduction in their catch.

Problem/Issue 4.

"ON SHOAL LAKE, WALLEYE STOCKS HAVE COLLAPSED."

4(a). **Strategy**

- Continue with walleye harvest closure until stocks have recovered.

Tactics

- Monitor walleye spawning run at Waugh to assess stock status.
- Assess stock status in Shoal Lake as a whole, through assessment monitoring.

Recovery of the Shoal Lake walleye fishery is a high priority.

4(b). **Strategy**

- Stock walleye into Shoal Lake to assist stock recovery.

Tactics

- Use pond-reared walleye fingerlings from Shoal Lake brood stock.
- Allocate allowable yield after recovery among user groups.

Once Shoal Lake walleyes have recovered, harvests will be regulated (controlled) to prevent future collapses. Stocking of fingerlings will be done in the near future if natural reproduction continues to fare poorly.

(ii) Environmental Quality

Problem/Issue 1.

Loss of environmental quality and the associated strategies and tactics are essentially the same as those identified previously in the section under sportfish. Essentially, fish habitat is to be protected, enhanced and/or rehabilitated for the benefit of the resources and the resource users.

(iii) Conflicts Among Users of the Environment and the Resource

Problem/Issue 1.

"CONFLICTS BETWEEN COMMERCIAL FISHERMEN AND OTHER FISHERIES USERS (EG. RESIDENT ANGLERS AND THE TOURIST INDUSTRY) ARE GREATEST FOR THOSE FISH SPECIES ANGLERS SEEK, WHICH ARE HIGHLY VALUED AND PRESENTLY OVER-USED (WALLEYE, NORTHERN PIKE AND LAKE TROUT)."

1(a). **Strategy**

- Reduce commercial harvest of fish which anglers place high value on.

This strategy has been discussed before under 3.2.7.3 **(i) Availability of Fish and Fishing Opportunities**. However, it is equally applicable here, although both the strategy and tactics (quota buy-outs) remain the same. The present initiative of "willing seller, willing buyer" will continue until sportfish quotas are met or a change in strategy is needed to achieve target harvests. Lake trout quotas will be reduced to zero by purchase of quotas.

In essence, it is the intention to reduce incidental catch to zero. The Ministry feels commercial food fishermen should be compensated for incidental quotas and will develop, with the fishermen, an appropriate mechanism to deal with the problem. The present problem is most acute with respect to lake trout.

1(b). **Strategy**

- Reduce conflicts with other user groups.

Tactics

- Encourage and where necessary legislate use of entrapment gear. Applicable to all District FMZ's with commercial fisheries.
- Direct fishermen to fishing during times of the year when conflicts are minimized. Applicable to all District FMZ's with commercial fisheries.

Reducing conflicts among sport anglers and commercial fishermen will be beneficial to all parties.

This strategy and associated tactics are actually quite similar to the previous strategy, although the issue is more clearly defined. It is the intention of the Ministry to encourage fishermen to use entrapment gear whenever, wherever and however it can.

1(c). **Strategy**

- Ensure effective compliance with regulations to conserve the industry and maintain public confidence.

Tactics

- Monitor commercial catches on site. Applicable to all District FMZ's with commercial fisheries.
- Enforce licence restriction. Applicable to all commercial fishermen.
- Simplify commercial fish reporting forms.

Enforcement is of course applicable to all user groups but because of the high profile and large catch capability commercial fishermen have, they

warrant special mention. Commercial fishermen themselves have asked for more direct monitoring to demonstrate to the public they can and do use fish resources other users do not.

(iv) Public Awareness and Scientific Knowledge

Problem/Issue 1.

"IN MANY INSTANCES CONFLICTS BETWEEN COMMERCIAL FISHERMEN AND SPORT ANGLERS IS NOT REAL BUT PERCEIVED. IN SOME INSTANCES IT APPEARS COMMERCIAL FISHERIES ARE ACTUALLY ENHANCING SPORTFISH FISHERIES, OR HAVE POTENTIAL TO DO SO IN THE FUTURE."

Strategy

- Increase the public education efforts of MNR.
- Investigate non sportfish removal as a tool for enhancing sportfisheries.

Tactics to accomplish this strategy remain the same as for other categories of fisheries as identified in this plan. With a strong effort in this area it is hoped that conflicts can be largely resolved and a unique lifestyle (commercial fishing) can continue into the future.

Use of commercial fishing as a management tool for sportfisheries needs clarification.

Problem/Issue 2.

"THE PUBLIC PERCEIVES MANY SPECIES OF FISH TO BE UNFIT FOR HUMAN CONSUMPTION. THIS HAS RESULTED IN LOW MARKET VALUE FOR THESE SPECIES (GENERALLY REFERRED TO AS 'COARSE FISH') AND AS A RESULT MANY COMMERCIAL FISHERIES ARE NOT VIABLE WITHOUT MORE VALUABLE SPECIES (SPORTFISH) ALLOWED IN THE CATCH QUOTAS."

2(a). **Strategy**

- Promote alternative fish species as edible and good human fare.

Tactics

In essence the tactics for this strategy are identical to those above — the need for increased education efforts. However, it probably also requires considerable input from the private sector with respect to successful marketing tactics.

3.3 SUMMARY OF THE MAJOR FISHERIES MANAGEMENT TACTICS AND IMPLEMENTATION SCHEDULE

In the following tables (Table 3a and 3b) all major tactics are summarized, the area the tactics are applicable to are identified, legislative changes required are noted and the implementation period (first five years or later) is given.

Some tactics were not outlined if they were felt to be mainly administrative in nature (eg. liaise with other government agencies) or were stating 'status quo' management (eg. commercial baitfish tactics). Some tactics detailed in the text and applicable to all or most user groups (eg. communication initiatives) are shown in the following tables as single, summarized tactics.

The area(s) where management tactics are proposed in Kenora District are illustrated in Figure 5, located in the back pocket of the document.

Finally, acceptance and compliance with changes in the fisheries regulations will require an enforcement presence. Although not generally mentioned in the text of this plan, enforcement is recognized as a key ingredient in the ultimate success of fisheries planning.

3.4 KENORA DISTRICT LAND USE GUIDELINE AMENDMENTS REQUIRED

This plan has suggested several targets, goals, management directions or baseline information that differs from those identified in Kenora District Land Use Guidelines (DLUG). These changes have been classed as MINOR, MAJOR or ADMINISTRATIVE amendments, relative to what the actual changes are.

A MINOR amendment is a change based on improved information, as in the improvement in accuracy of an allowable yield estimate. MINOR amendments are presented for information purposes only.

A MAJOR amendment identifies a proposal to change management direction. These changes involve both the types of activities proposed to occur in a particular zone (as identified in DLUG) and changes to targets and goals (with respect to amount of resource use or harvest).

ADMINISTRATIVE amendments clarify wording so management directives are more precise or definable. As with MINOR amendments, these changes are presented for information purposes only.

Approval of this plan with identified changes to DLUG will be reflected in the five year review of the DLUG document.

Appendix II gives the proposed changes to DLUG and identifies the amendment classification.

TABLE 3a

SUMMARY OF TACTICS AND IMPLEMENTATION SCHEDULE TO THE YEAR 2000. PRE- AND POST-ASSESSMENT WITH EXISTING FUNDING

Summary of Tactics	Area Applicable To (eg. FMZ, specific lakes)	Legislative Change Required		Implementation Period 1st 5 years	
		Yes	No	1987-91	1992-2000
Create Fisheries Management Zones (FMZ's).	District wide	X		X	
Introduce maximum size limit of walleye. Daily and possession limit remains at six (6) but only one (1) fish can be ≥ 50 cm (19.5 in) total length.	FMZ's 2,3,8,9,10,11,12,13	X		X	
Assess impact of walleye maximum size limit by pre- and post-monitoring of angler catchers.	FMZ's 2,3,8,9,10,11,12,13, and 19		X	X	
Introduce a combination walleye/sauger limit in conjunction with a maximum size limit for walleye. One additional fish is allowed in daily catch/possession limit provided at least two (2) fish are sauger.	FMZ 8 (Lake of the Woods)	X		X	
Assess impact of walleye/sauger combination limit by pre- and post-monitoring of angler catches.	FMZ 8		X	X	
Initiate adult walleye transfers to suitable lakes where walleye are absent. Lakes must first be assessed for suitability.	FMZ 10 - Boyne Lake		X		X
	- McConnell Lake		X	X	
	FMZ 13 - Stiffo Lake		X		X
Create and implement fish sanctuaries to protect pre- and post-spawning and spawning fish.	FMZ 8 - Snake Bay	X		X	
	- Nestor Falls	X		X	
	FMZ 11 - Norman Dam	X		X	
	FMZ 12 - Salvesen Lake	X		X	
Assess harvest of walleye and pike prior to sanctuary status.	FMZ 8 - Snake Bay		X	X	
	- Nestor Falls		X	X	
	FMZ 11 - Norman Dam		X	X	
Reduce the walleye limit **dependent upon success/failure of other harvest reduction strategies/tactics.**	District wide or as required	X			X

TABLE 3a

SUMMARY OF TACTICS AND IMPLEMENTATION SCHEDULE TO THE YEAR 2000. PRE- AND POST-ASSESSMENT WITH EXISTING FUNDING
(continued)

Summary of Tactics	Area Applicable To (eg. FMZ, specific lakes)	Legislative Change Required		Implementation Period 1st 5 years	
		Yes	No	1987–91	1992–2000
Introduce a maximum size limit for northern pike. Daily and possession limit remains at six (6) but only one (1) fish can ≥ than 70 cm (27.5 in) total length.	District wide	X		X	
Assess impact of northern pike size limit by pre- and post-monitoring of angler catches.	District wide		X	X	
Reduce the black crappie daily and possession limit from 40 to 30.	District wide	X		X	
Reduce the daily catch limit of muskellunge to one (1) and retain the possession limit of two.	District wide	X		X	
Increase the minimum size limit on muskellunge to 102 cm (40.0 in).	FMZ 8	X		X	
Increase the minimum size limit on muskellunge to 86 cm (34 in).	District wide **except** FMZ 8	X		X	
Examine whether muskellunge lakes, other than Lake of the Woods, should have a minimum size of 102 cm (40 in).	FMZ 2 – Kakagi Lake		X	X	
	FMZ 3 – Dryberry Lake		X		X
	– Rowan Lake		X		X
	– Shingwak Lake		X		X
	FMZ 11 – Winnipeg River		X	X	
	FMZ 13 – Favel Lake		X	X	
	– Big Canyon lake		X	X	
	– Silver Lake		X		X
Increase minimum size limit on muskellunge in essential lakes (see above tactics as required).	As above	X		X	
Assess suitability of waters for re-establishment of lake trout and stock dependent upon results.	FMZ 14 – Dogtooth Lake		X	X	
	FMZ 11 – Goshawk Lake		X		X
Assess suitability of waters for put-and-delayed-take splake and speckled trout fisheries. Stock and/or rehabilitate as required.	FMZ 3 – Lake 132		X		X
	FMZ 14 – Tox Lake		X		X
	FMZ 13 – Howard Lake		X		X
	– Arpin Lake		X		X
	– Bill Lake		X		X

TABLE 3a

SUMMARY OF TACTICS AND IMPLEMENTATION SCHEDULE TO THE YEAR 2000.
PRE- AND POST-ASSESSMENT WITH EXISTING FUNDING
(continued)

Summary of Tactics	Area Applicable To (eg. FMZ, specific lakes)	Legislative Change Required		Implementation Period 1st 5 years	
		Yes	No	1987–91	1992–2000
	- Emerson Lake		X		X
	- East Emerson Lake		X		X
	- Havik Lake		X		X
	FMZ 10 - Sherwood Lake		X		X
Control the use and harvest of smelt in the Northwestern Region.	District wide	X		X	
Continue to reduce sportfish allocation to commercial fishermen on 'willing seller, willing buyer' basis.	District wide		X	X	
Implement travel restrictions on roads accessing remote, high quality fisheries.	FMZ 12 - Lennan Lake Road		X	X	
	- Umfreville Road		X	X	
	- Werner Lake Road		X	X	
	FMZ 3 - Maybrun Road		X	X	
Apply Section 13 under Public Lands Act enabling tight controls on development.	FMZ 8 - Clearwater Bay	X		X	
	- Echo Bay	X		X	
Continue to liaise with Indian Bands and keep abreast of Indian Fishing Agreement Negotiations.	District Wide	Legislative changes and implementation schedule are unknown at this time.			
Continue to promote and work with the public on improving fish habitat via the Community Fisheries Involvement Program (CFIP) or other related programs.	District wide		X	X	
Manage water flows where existing dams control water levels to optimize those water levels for spawning walleye. Applicable to all zones where water control structures exist.	FMZ 10 - Ena Lake		X	X	
	- Black Sturgeon Lake		X	X	
	FMZ 8 - Longbow Lake		X	X	
	- Blindfold Lake		X	X	
	- Berry Lake		X	X	
	- Dogpaw Lake		X	X	
	FMZ 3 - Cedartree Lake		X	X	
Use the planning process to route timber access or other roads away from lake trout and walleye lakes. Use the same process to give access to lakes with species other than lake trout and walleye.	District wide		X	X	

TABLE 3a

SUMMARY OF TACTICS AND IMPLEMENTATION SCHEDULE TO THE YEAR 2000. PRE- AND POST-ASSESSMENT WITH EXISTING FUNDING

(continued)

Summary of Tactics	Area Applicable To (eg. FMZ, specific lakes)	Legislative Change Required		Implementation Period 1st 5 years	
		Yes	No	1987-91	1992-2000
Expand the Crown Land Camping Program to coincide with new road construction.	FMZ's 2,3,12,13,14, and 19		X	X	
Expand area where angler validation tag is applicable.	FMZ 2 FMZ 3	X X		X X	
Develop commercial boat cache models with MTR to reduce harvest but provide more opportunities and greater economic benefits.	District wide		X	X	
Continue to use Lake of the Woods Assessment Unit for fisheries research purposes (eg. Sturgeon).	FMZ 8		X	X	
Liaise with other agencies to provide logistic and moral support for fisheries research.	District wide		X	X	
Continue with Aquatic Habitat Inventory Program.	The following list are those lakes to be surveyed within the next five (5) years. If other lakes not shown come to be suspected of being trout lakes or are in areas proposed for timber access or mining activities, then those lakes will be surveyed.		X	X	

Lake Name	*Species suspected of being present*	*FMZ*
Little Mountain	l. trout	12
Paterson	l. trout	10
N. of Wilson	l. trout	12
E. of Bluff	l. trout	10
Two lakes by Wild	l. trout	13
N. of Snook	l. trout	10
Katimiagamak	walleye, crappie	3
Three lakes N and NE of Wilson	unknown	12
Walleye	walleye	12
Elbow	walleye	12
Otakus	walleye	3
Low	walleye, SMB n. pike	13

TABLE 3a

SUMMARY OF TACTICS AND IMPLEMENTATION SCHEDULE TO THE YEAR 2000.
PRE- AND POST-ASSESSMENT WITH EXISTING FUNDING
(continued)

Summary of Tactics	Area Applicable To (eg. FMZ, specific lakes)	Legislative Change Required		Implementation Period 1st 5 years	
		Yes	No	1987–91	1992–2000
	Lake Name	*Species suspected of being present*	*FMZ*		
	Bays	unknown	10		
	Silver Fox	walleye	12		
	SW of Silver Fox	walleye	12		
	NNW of Fletcher	unknown	12		
	NNE of Sand	unknown	10		
	Viola	unknown	3		
	Loon	unknown	3		
	Mooseview	unknown	3		
	Mongus	unknown	3		
	Carstens	unknown	9		
	Barras	unknown	9		
	O'Dell	unknown	9		
	Wake	unknown	9		
	Fox	unknown	9		
	ESE of Lennan	unknown	12		
	NW of Oak	unknown	12		
	Black Sturgeon Lakes (updating)	walleye, n. pike SMB	10		

TABLE 3b

SUMMARY OF TACTICS AND IMPLEMENTATION SCHEDULE TO THE YEAR 2000.
PRE- AND POST-ASSESSMENT WITH ADDITIONAL FUNDING

Summary of Tactics	Area Applicable To (eg. FMZ, specific lakes)	Legislative Change Required		Implementation Period 1st 5 years	
		Yes	No	1987-91	1992-2000
Increase the amount and quality of fisheries information disseminated to the public using a variety of communicative mediums.	District wide - part of regional and provincial initiative.		X	X	
Improve communications between and among user groups by increasing MNR efforts at public relations.	District wide - part of regional and provincial initiatives.		X	X	
Reduce the daily catch and possession limit of lake trout from three (3) to two (2).	District wide except FMZ 8. Initially includes all waters in FMZ 3; see next tactic.	X		X	
Assess effects of lake trout limit reduction via creel surveys.	FMZ 13		X	X	
Reduce the daily catch limit of lake trout to one (1), possession limit two (2) and introduce a maximum size limit of 65 cm (26 in). Only one (1) fish can be equal to or greater than this length.	FMZ 8 - Whitefish Bay The following lakes in FMZ 3 - Dryberry Lake - Rowan Lake	X X X		X	 X X
Implement single, barbless hook and artificial bait-only restrictions.	FMZ 8 - Whitefish Bay FMZ 3 - Dryberry Lake - Rowan Lake (both FMZ's - from Jan. 1 to 3rd Saturday in May.) FMZ 14 - all year, but no bait restrictions.	X X X X		X X	 X X
Close winter season on lake trout immediately. Season to open 3rd Saturday in May until September 30.	FMZ 8 (Clearwater Bay, Echo Bay, Cul de Sac)	X		X	
Establish a committee to formulate a lake trout management plan specific to Clearwater Bay, Echo Bay and Cul de Sac.	FMZ 8 (Clearwater Bay, Echo Bay, Cul de Sac)	X (to implement any changes)			X

TABLE 3b

SUMMARY OF TACTICS AND IMPLEMENTATION SCHEDULE TO THE YEAR 2000. PRE- AND POST-ASSESSMENT WITH ADDITIONAL FUNDING
(continued)

Summary of Tactics	Area Applicable To (eg. FMZ, specific lakes)	Legislative Change Required		Implementation Period 1st 5 years	
		Yes	No	1987–91	1992–2000
Require all non-residents of Canada who angle for lake trout and/or muskellunge to do so through an Ontario base of operations or be in accompanyment of an Ontario resident who can legally catch and possess fish.	District wide	X		X	
Assess effectiveness of above changes to lake trout regulations (use: creel census, other methods).	FMZ 3		X		X
	FMZ 8		X	X	
	FMZ 13		X	X	
	FMZ 14		X	X	
Implement a slot-size for walleye to manage for trophy fishing opportunities. Catch and possession limits remain at six but no fish can be retained between 50 cm (19.5 in) and 65 cm (25.5 in) inclusive. One fish over 65 cm would be legal.	FMZ 14	X		X	
Assess effectiveness of above tactic by using creel surveys and other forms of assessment.	FMZ 14		X	X	
Initiate stocking of pond-reared walleye.	FMZ 8 – Shoal Lake		X	X	
Assess effectiveness of walleye stocking program.	FMZ 8 – Shoal Lake		X	X	
Implement a slot-size limit for muskellunge.	FMZ 10	X			X
Investigate muskellunge populations targeted for slot-size limit and do pre- and post-monitoring to assess impacts of change.	FMZ 10		X		X
Assess waters for stocking with muskellunge.	FMZ 11 – Umfreville Lake		X		X
Stock muskellunge if assessment is favourable.	FMZ 11 – Umfreville Lake		X		X

TABLE 3b

SUMMARY OF TACTICS AND IMPLEMENTATION SCHEDULE TO THE YEAR 2000.
PRE- AND POST-ASSESSMENT WITH ADDITIONAL FUNDING
(continued)

Summary of Tactics	Area Applicable To (eg. FMZ, specific lakes)	Legislative Change Required		Implementation Period 1st 5 years	
		Yes	No	1987–91	1992–2000
Purchase all lake trout quotas from commercial fishermen.	FMZ 2 – Kakagi Lake		X	X	
	FMZ 8 – Dryberry Lake		X	X	
	FMZ 8 – Echo Bay		X	X	
Identify potential lakes for Crown land cottage subdivisions.	FMZ 10, excluding lakes with muskellunge and lake trout.		X		X
Initiate 'land swap' or title purchase of undeveloped private land on high quality, remote lakes.	FMZ 3 – Atikwa Lake		X	X	
Investigate potential for tourism expansion.	FMZ 11		X		X
Initiate data collection on Assessment Unit type lakes.	FMZ 3 – Berry Lake		X		X
	– Rowan Lake		X		X
	FMZ 10 – Sand Lake		X	X	
	– Upper Black Sturgeon		X	X	
	FMZ 11 – Lount Lake		X		X
	FMZ 12 – Roger Lake		X		X
	FMZ 14 – Dogtooth Lake		X	X	

3.5 SUMMARY

The purpose of this plan is to outline long-term fisheries management direction to the year 2000 and to identify short-term management activities to be carried out in the next five years in the Kenora District. There will be some innovative changes to the Kenora District's fisheries, including the development of new Fisheries Management Zones and specific species management within these zones. Slot-size restrictions will be introduced in some zones, as well as gear restrictions where deemed necessary.

Although this plan is to the year 2000, it may be necessary to modify, add, delete or alter the plan or specific strategies and tactics at each or any five year review. A variety of circumstances may necessitate changes such as new science, improved data, new ideas or new problems being identified. These will be dealt with accordingly during each review.

Unforeseen circumstances may also occur that may necessitate a change between five year reviews. Such changes will be the exception rather than the rule.

4.0 PUBLIC REVIEW

During each stage of this Fisheries Management Plan there was a strong committment to solicit public input as required by the planning and management system used by the Ministry of Natural Resources.

The management of the resource, the problems and issues associated with managing that resource, and the management strategies and tactics chosen to address those problems and issues, reflect many of the concerns the public have had with ideas presented in earlier planning stages.

Public involvement can be briefly summarized as follows:

Problems/issues were first identified and presented to the public for their comment and input; based on this, problems/issues were re-evaluated and strategies and tactics to solve them were developed; a draft plan was written and public input was again solicited; and the final plan was written using all available information and input received.

All comments received from the public are confidential and will remain so, unless permission for release, in writing, is granted by the opinion giver.

The Kenora District would like to take this opportunity to thank all those people who participated in the formulation of this Fisheries Management Plan. Their input, advice and criticisms were invaluable. This is their plan.

Fisheries Management Plan Glossary

ALLOWABLE YIELD

The weight of fish by species that can be harvested annually from a lake, on a sustained basis, while maintaining angler quality.

ANGLER OPPORTUNITY

Any amount of effort in a day, constitutes an angler-day. For the purpose of converting angler-hours to angler-days, 4 hours will be used.

ANGLER VALIDATION TAG

A program implemented in 1985 on Rainy Lake, Rainy River and Lake of the Woods of which the intent was to: limit sportfish harvest on these waterbodies by non-Ontario based, non-residents of Canada; obtain resource rent for use of Ontario's fisheries resources by those user groups; and to encourage use of existing tourism facilities.

AQUATIC HABITAT INVENTORY

A basic study of a lake or river to determine species of fish present, water chemistry, depth, water volume and other characteristics. The information obtained can be used to determine the potential and allowable yields of a lake.

AREAS OF CONCERN

Areas requiring a particular management prescription in order to maintain or improve resource values such as fish and wildlife habitat, forest genetic resources, scenic areas and other recreational and tourism values.

BAIT FISH

Any fish species that can legally be harvested by the commercial bait fish industry.

BOAT CACHE

One or more boats authorized to be left unattended on Crown Land for a period of time.

COLDWATER LAKES

Those lakes having characteristics which would support salmonids such as lake trout or brook trout. Usually these are relatively deep, clearwater lakes.

COLDWATER FISHERIES

Lake trout and put-and-delayed-take salmonids (eg speckled trout, splake). A lake trout fishery is self-explanatory.

COLDWATER STREAMS

Those streams having characteristics that would support salmonids such as brook trout. The water is generally clear and cold.

COMMERCIAL FISH

Any fish that are harvested by the commercial fishing industry under the authority of a commercial fishing licence.

CREEL SURVEY (CENSUS)

A survey of anglers to determine angler origin, number of fish caught, species of fish caught, weights of fish and number of hours fished. Other information such as gear being used and information on the age of fish may also be collected.

CRITICAL FISH HABITAT

Any fish habitat required for the maintenance of a healthy fish population or otherwise identified as essential to the achievement to the Ministry's fishery program objectives.

CROWN LAND RECREATION PROGRAM

An initiative implemented in 1984 within the Northwestern Administrative Region. The intent of this initiative was to encourage non-Ontario based, non-residents of Canada to use existing tourist facilities. This was done to contribute to local and provincial economies through use of Ontario's fishery resources and to generate funds from non-residents of Canada using Crown land. In addition, this program involves the designation of areas closed to camping, by non-residents of Canada, to redistribute use from sensitive fisheries and popular camping areas.

FISHING QUALITY

Refers to aspects of the total angling experience, including success, diversity of fish species available to catch, broad size range of fish including trophy specimens, and type of angling environment (remote wilderness experiences or experiences which are more accessible by road or boat).

GOAL

A general purpose to which the Ministry aspires.

HARVEST

Fish taken and kept by fisheries resource users.

INDIAN SUBSISTENCE

Fish harvested by Indian people and used for personal consumption.

LIMITED ENTRY FISHERY

A fishery that limits the number of anglers permitted to fish on a lake. Harvest restrictions may also be applied.

MANAGEMENT

The judicious use of resources. In this plan fisheries resources and their management is of greatest concern.

MAXIMUM SIZE LIMITS

A management technique that protects fish above a specified length (eg. fish caught that are larger than the specified length may have lower creel limits than fish smaller than the specified length).

NEW CROWN LAND COTTAGE SUBDIVISIONS

Land presently owned by the province to be offered up for sale for the purpose of cottage development. Private lands may still be subdivided into cottage development unless otherwise specified.

NON-RESIDENT DAY-USER

A non-resident of Canada fishing for one day only and not through an Ontario base of operation (a tourist resort or owned property). Also referred to as a non-resident, non-contributor.

OBJECTIVE

A quantifiable and attainable end which the Ministry's efforts are intended to accomplish.

OUTPOST

A form of tourist operation usually consisting of housekeeping accommodations located primarily in remote areas with limited access.

OVERHARVESTING

Harvesting of fish by users which exceed the annual allowable yield.

POLICY

A government decision concerning the objectives to be achieved and the means of achieving them. For resource management planning, we are mainly concerned with the objectives, targets and strategies and tactics.

QUALITY FISHERY

With respect to angling opportunities: the number of fish caught. A quality fishery enables anglers to catch, but not kill, a lot of fish.

REHABILITATION

This term may be applied to both fish populations and fisheries habitat. In both instances, rehabilitation denotes efforts to enhance or restore a degraded or stressed situation to its original condition.

RESIDENT OF CANADA

An angler whose principle residence is in Canada, including Ontario.

RESIDENT OF ONTARIO

An angler whose principle residence is in Ontario.

SINGLE, BARBLESS HOOK

A hook with one eye but with one, two or three hooks (eg a treble hook would still be a single hook). Barbs removed or not present.

SLOT-SIZE

A management technique that protects fish within a specified length range (ie. fish caught that fall within the length range must be released. The slot protects breeding individuals.

SPORTFISH

Any fish that are legally caught by angling. Usually include such species as: walleye, northern pike, perch, lake trout, brook trout, smallmouth bass, muskellunge and lake sturgeon.

STRATEGY

Broadly planned actions or measures to achieve a desired end.

TACTIC

A method devised to achieve one or more strategies.

TARGET

A quantified end to be achieved or completed by a specific date.

TOURISM

The business of attracting visitors and catering to their needs and expectations. Visitors are travellers who will return home after their visit and who may return to pay another visit.

TOURIST OPERATION

An establishment or facility which consists of any one or a combination of any of the following: cabin establishment, camping establishment, cottage establishment, hotel, motel, motor hotel, outpost establishment, resort, houseboat operation or boat cache and is generally in the tourism business. (Tourist or tourism operator or outfitter have corresponding meanings.)

TROPHY FISHERY

A fishery managed for trophy opportunities. It provides the opportunity to catch a large fish.

TROPHY OPPORTUNITIES

Fisheries managed for trophy opportunities are attempting to increase the possibility of catching a large fish. These fisheries will have regulatory restrictions exceeding those in effect elsewhere.

WARMWATER LAKES

Those lakes other than coldwater lakes.

WARMWATER FISHERIES

All sportfish species including muskellunge but not lake trout or other salmonids (eg speckled trout).

WARMWATER STREAMS

Those streams other than coldwater streams.

WORK PLAN

A plan prepared annually which defines what management activities are to be undertaken for that year. Direction is taken from the implementation schedule.

REFERENCES

Bedi, N. nd. 1980 surveys of Ontario's resident and non-resident sportfishermen. Ont. Min. Nat. Res. 149 pp + appendices.

Canada and Ontario. 1976. Fourth report, Federal-Provincial strategic planning for Ontario fisheries: management strategies for the 1980's. 21 pp.

Hough, Stansbury and Michalski Ltd. 1982. The Lake of the Woods fishery: a social and economic analysis. Ont. Min. Nat. Res. 486 pp.

Ministry of Natural Resources. 1981. Background information: Kenora District land use plan. 102 pp.

Ministry of Natural Resources. 1982. Northwestern Ontario: Strategic land use plan. 71 pp.

Ministry of Natural Resources. 1983. Kenora District land use guidelines. 99 pp.

Ministry of Natural Resources. 1984. Kenora District fisheries management plan: resource inventory and analysis,1984. 248 pp.

Ministry of Natural Resources. 1986. District fisheries management plans: planning manual. 91 pp.

Ministry of Natural Resources. 1986. Kenora District fisheries management plan: background information and optional management strategies, 1987 to 2000, a summary. 58 pp.

APPENDIX I

BORDER LAKES ADMINISTERED BY KENORA DISTRICT

BORDER	LAKE NAME	ADMINISTERED BY KENORA DISTRICT	OTHER
KENORA - FORT FRANCES	KAKAGI	X	
	BROWN TROUT	X	
	ROWAN	X	
	BASS		X
	42° 09' 93° 43'		X
	KATIMIAGAMAK		X
	CLARKSON		X
	KAKABIKYCHAN (PINUS)		X
	OTTERSKIN		X
KENORA - DRYDEN	OAK LAKE	X	
	BIG CANYON	X	
	SHRUB	X	
	RAIL	X	
	SILVERY	X	
	EDDY	X	
	RAINMAKER	X	
	SEGISE		X
	CANYON		X
	FISH		X
	RODDY		X
	DANIELS		X
KENORA - RED LAKE	RIGHT	X	
	EAGLE	X	
	RICKABY	X	
	ODD	X	
	EXPECTED		X
	ROWDY		X
	SYDNEY		X
	TALON (GHOST)		X
	BEE		X
	WILCOX		X
	SOLITARY		X
	ANDERSON		X
KENORA - MANITOBA	OCTOPUS	X	
	SNOWSHOE	X	
	SHINEWATER	X	
	MUSK	X	
	JADEL	X	
	HIGH	X	
	DAVIDSON		X
	RYERSON		X
	MANTARIO		X
	HELLO		X

APPENDIX II

PROPOSED AMENDMENTS TO KENORA DISTRICT LAND USE GUIDELINES

Management Intent DLUG	Management Intent DISTRICT FISHERIES PLAN	Amendment Classification MAJOR	MINOR	ADMINISTRATIVE
Fish harvest satisfaction level of 2 kg/angler day (eg. fish kill/angler).	Reduce harvest (kill) below allowable yield, increase numbers of fish caught.	X		
Maintain 0.3 million kg/yr harvest of sportfish species by commercial food fishery.	Reduce commercial food fish harvest of sportfish to 0.0875 million kg/yr (excluding Shoal Lake).	X		
Commercial sportfish species harvests includes lake trout.	Commercial lake trout quota to be eliminated.	X		
The existing commercial food fish licences on Dryberry Lake, Dogtooth Lake, etc. will continue.	No commitment has been extended to the continuation of any commercial food fish licence.	X		
Allowable yield of sportfish is estimated at 1.04 million kg/yr.	Allowable yield of sportfish is estimated at 1.3 million kg/yr.			X
Sportfish target is to produce (harvest) 1.04 million kg/yr (100% of sportfish target).	Sportfish harvest target is **less than the allowable yield** of 1.3 million kg/yr.	X		
Lake trout target is to produce from 27,585 kg to 82,755 kg/yr.	To manage lake trout harvest below 51,400 kg/yr.		X	
No mention of specific fisheries management direction for trophy fisheries.	Specific trophy fisheries are indicated for several areas (eg. FMZ 3 – Dryberry Lake, Rowan Lake; FMZ 8 – Clearwater Bay, Whitefish Bay; and FMZ 14).	X		
Maintain existing levels of tourism (most of District). Expansion of Tourism facilities may be considered (part of English River, Atikwa Lake area).	Investigate potential for tourism expansion in FMZ 11; maintain existing tourism values, recognizing the complexity of the actual user groups (FMZ 8, 10) maintain tourism facilities catering to anglers, but not at the expense of increasing the harvest of fish.			X
No new Crown land cottage lots will be available.	If Crown land cottage lots are to become available, suitable lakes in FMZ 10 are to be identified for development.	X		

APPENDIX III

PUBLIC CONSULTATION EFFORTS

July, 1986	— advertisements in local papers "We need your ideas".	November, December, January	Meetings with Interest Groups
October, 1986	— advertisements in local papers "It's your say!"	November 4, 1986	Open House for Background Summary and Optional Management Strategies — Kenora
October, 1986	— Letters to the following user groups: (in no particular order)	November 6, 1986	Open House for Background Summary and Optional Management Strategies — Nestor Falls
	Kenora District MNR Staff Lake of the Woods Control Board Manitoba Department of Natural Resources Minnesota Department of Natural Resources MNR Native Negotiating Team Northern Ontario Tourist Outfitters Assoc. (NOTO) (Parent Organization and local representative) Ontario Federation of Anglers and Hunters (Parent Organization, Zone 1 rep., Lake of the Woods Gun Club) Outfitters and Air Services Persons indicating a Specific Interest in Fisheries Management Planning (General Public) Tourist Lodges/Resorts Local Tourist Organizations Local Cottagers Association Local Native Organizations Local News Media Local Services Boards Local Roads Boards Municipalities/Towns and Townships Chambers of Commerce Affected Resource Users		Copies of "Background Document and Optional Management Strategies" distributed at open houses and by mail.
		September, 1987	Advertisements in local media for draft plan
			Tabloids mailed to all households in Kenora District
			Open House for Draft Fisheries Management Plan
			Copies of "Draft Fisheries Management Plan" distributed at open houses and by mail
		September to November	Meetings with several interest groups regarding "Draft" plan
			Also, throughout the preparation of the "Background Document and Optional Management Strategies" and the "Draft Fisheries Management Plan" there was extensive radio coverage and a feature on local television

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